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The Canadian Journal of Medicine and Surgery

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Original Contributions.

IDEALS IN MEDICINE.*

BY J. F. W. ROSS, M.D., TORONTO.

Fellows of the Academy of Medicine, Ladies and Gentlemen:

Allow me to thank you for the honor conferred upon me when elected as President of this Academy of Medicine of Toronto. It is my intention to hand over the tiller at the end of my term, feeling that the new craft has been safely launched in a calm sea, and that it is so built that it will be well able to weather any storm. As the first captain on the ship I have felt it incumbent on me to make a few remarks regarding the rules of the sea, and the dangers to be avoided in navigation. Any shortcomings in this address must be attributed to two causes—inability to do better, and hasty preparation. We have all listened to the regulation presidential address, and we have all wondered why they are delivered with such regularity and with so little benefit; however, I am forced to inflict you as a matter of custom.

During our professional career there are occasions that stand out in bold relief—occasions such as this, when one who is passing into the autumn of life addresses his fellows in his beloved profession from the pedestal upon which they have set him. It is quite probable that the sentiments expressed may not find a sympathetic response in the breasts of all, for it is neither possible nor desirable that we should all think alike, but with one sentiment I feel satisfied everyone will agree, the necessity for that spirit of unity, peace and concord in our Academy of Medicine which is so essential to the dignity and usefulness of our profession.

We have here a large city that has grown to its present proportions with astonishing rapidity. Our educational institutions, we

* Address delivered at the opening meeting of the Academy of Medicine, Toronto, December, 1907.

hope, have kept pace with this amazing growth, and among them, as the chief ornament, our *alma mater*, of which we are justly proud.

After many weary years of isolated divorce the medical faculty was reunited in the bonds of matrimony, and again became one of the consorts, and not the least, of our many husbanded mother. After the consummation of this happy event a still greater and still stronger union took place when the two great educational families were merged in one. The time seemed ripe for a union, not only of the two great teaching families, but of the little medical experience meetings—our medical societies, into a much greater, more efficient, more active and a better organized body, namely, an Academy of Medicine. Any little effort I may have put forth to gain this desired end has been due to the inspiration of that ideal teacher, father and friend, the late Professor James E. Graham, who labored so arduously among the younger generation for the promotion of a better scientific spirit—a something to elevate them from the ordinary rut of humdrum routine practice. He early realized that the university but builds the foundation, firm and substantial as a necessity, on which must be reared the superstructure, and that both must enter into the completed building and the structure be judged as a whole. It is the finished product that we require; beyond the university walls much must be done to fit out a medical man as one of our ideals. He must leave the halls of learning a student still; he must leave the class-room for the council chamber, and our council chamber in this fair city, we hope, will be our Academy of Medicine.

I propose to consider my subject under three heads—ideals in education, ideals in practice, and ideals in the aims and conduct of our Academy.

Ideals in Education.

It may be granted that the highest purpose in the education of a medical man is to fit him to discharge his future duties. Let us consider, then, the means provided to furnish him with this equipment. Two prominent educational systems at once present themselves to our notice, the *English* and the *German*. In a recent valuable paper Sir Felix Semon draws an interesting parallel between the two systems, from which, I think, some lessons may be learned. Permit me to give you a short synopsis of their main features as described by him.

In England the course of actual study for the medical profession occupies five years, three of which are consumed in preliminary and intermediate work, only two being allowed for clinical instruction. In Germany, out of six years allotted to the course, two and a half are devoted to preliminary and intermediate instruction, and three and a half to clinical work. A sixth, or additional year for clinical instruction was added in 1904.

In Britain the medical institutions receive no State aid, and frequently the authorities are hampered in their work and in the introduction of much-desired improvements owing to lack of funds. In Germany the teaching institutions are wholly supported by the State, and the question of money does not stand in the way of the promotion of the progress of medical science.

After a very acrimonious discussion in the days gone by in connection with the question of State-aided medical education, and after the restoration of the Medical Faculty of Toronto University, the University Commission, viewing this matter from all sides, finally came to the conclusion that the question involved not merely the necessary advancement in ordinary education, but also the prosecution of research work, in the results of which the country has so deep an interest, and from which it may reap so great a benefit. In the promotion of both the State has obligations. The extent of these obligations it may be difficult now to determine. We have, therefore, in this country accepted the wisdom of the German in preference to the lack of foresight of the British.

In the appointment of teachers the two systems present wide contrasts. With us the baneful system of "inbreeding" still prevails, and when a physician once obtains a position on the teaching staff, his promotion follows as a matter of course. This comfortable certainty does not tend to stimulate him to do further original work. To the German professor, promotion only comes with achievement, and the necessity for constant and patient research always exists.

A comparison of the emoluments received by the teachers under the two systems does not redound to the credit of the English system. With us, unfortunately, the salaries of those teaching medicine, except in a few of the primary branches, have been based upon the idea that they are able to carry on a private practice, and the fact has been lost sight of that in order to do so successfully their time must be their own. The teachers are thus hampered in their work, as they are endeavoring to serve two masters. On the other hand, the public should not be deprived of the benefits to be derived from the knowledge and skill acquired by years of faithful toil as teachers. The ideal condition is a difficult one to arrive at.

German universities, unlike ours, are State institutions, regulated and supported by the State and conducted on a uniform and officially prescribed plan. As a consequence of this uniformity a student is not confined to the sphere of one university. He may change it at the end of each term if he desires, and he frequently attends three, and even four, during the course of his studies. He is less worried by examinations than his English cousin, though the three he has to pass are conducted with a thoroughness scarcely equalled in the English examinations.

Owing to the greater number of teaching institutions in Britain and the distribution of the students over them, practical bedside teaching is greatly superior to that afforded by the German system, the crowded German clinics not permitting that close personal contact with experienced teachers enjoyed by the English student. I understand, however, that this overcrowding has been of late years overcome to some extent by the utilization of extra-mural hospitals for the purpose of clinical teaching.

From the foregoing comparisons it must be admitted that of the two educational systems the German more closely approaches the ideal. Modern clinical methods are new in medicine, and in this field of study the Germans lead the world. Complaints have been heard here and elsewhere that candidates for the positions of house physicians, house surgeons, medical and surgical assistants are often found deficient in the knowledge of elementary laboratory work. Why? Because too much of their time has been given to preliminary studies and too little to practical work.

A training is useless unless adapted to the real needs of the person trained. The Germans have laid this truth to heart, for their regulations expressly provide that the examinations in physics and chemistry "have to keep particularly in view the *requirements of the future physician.*" While the Germans have been making a march in advance we have been retrograding, owing to our acquiescence with the demands of the teachers of purely scientific subjects. Teachers of physiology and chemistry are intent on turning out physiologists and chemists, and not on turning out well-trained physicians to heal the sick. Students—embryo physicians—have much else to learn to fit them for their future vocations. If men desire to become chemists and physiologists and take the degree of doctor of medicine as a matter of form, well and good, but our curriculums should not be framed to suit the few and injure the many. Subjects of the greatest importance to the future practitioner have to suffer in proportion to the time devoted to purely scientific subjects.

Out of five years the English student has three removed entirely from the hospital wards. Surely the tables should be turned, and two years given to the primary branches and three to the final studies. The early work of the preliminary studies is but frugal fare, while the real banquet is composed of clinical activities. Each clinical fact obtained is as gold in the storehouse of knowledge of the young doctor. It is true that scientific and clinical training are inseparable. They must dwell together, but while the scientific training is more important to the scientist, clinical training is more important to the practitioner, and we are developing and training future practitioners.

Another place in which scientific and clinical training must go

hand-in-hand is the hospital, and a hospital is sadly lacking in equipment unless properly fitted with first-class laboratories. I would go further, and say that every hospital should be provided with a practical physiologist, doing research work on the very threshold of disease. Not only should we have pathological laboratories, but we should have physiological laboratories connected with every hospital. In this way we should be able to round up the studies of the students by giving them a campus on which the clinicians and scientists may struggle for the mastery over disease. As these requirements are expensive adjuncts, teaching hospitals, as a link in the great chain of State education, should be liberally endowed by the government.

In educational matters we must be content to build slowly and to see changes introduced with caution. Each teacher should endeavor to realize the limitations of his power. I think, however, that improvement might be made in our system in three particulars without the fear of anything but desirable results; namely, a rearrangement of the medical curriculum by which more time could be devoted to clinical work; a reorganization of our method of appointing and promoting teachers, and the requirement of a better acquaintance with the French and German languages. In support of my last suggestion I cannot do better than to quote what Sir Felix Semon says in this connection:

"When medicine is becoming more international every day, when the reading of important new papers in the original language is most desirable to many of us, when we have international medical congresses, when we come into personal contact with so many foreign *confreres,* and when not rarely patients belonging to other nationalities, and not speaking a word of English, seek the aid of many of us—a conversational knowledge at any rate, and one enabling us to read French and German medical papers in the original, is becoming every day more a requirement of the cultured medical man."

If modern languages and classics cannot be mastered by the present school system, would it not be advisable to admit to the study of medicine only those who have obtained an Arts' degree?

Ideals in Practice.

"The practice of medicine is an art not a trade, a calling not a business," has been said by one well-known to all of us. Often the best part of a physician's work lies in the influence which he exercises in the community. When the young man leaves his medical school and enters upon the practice of medicine his education is not finished. It is to be a lifelong study, and the education of the moral man must keep pace with the intellectual. Whether he is a success or a failure will depend upon

himself and the honest labor of head and heart which he lays upon the altar of his profession. It is said that the struggle for the ideal is the struggle for the impossible. This may be true, but we are the better for the struggle, and the world is the better for our efforts, even though the end is never gained. "To travel hopefully is better than to arrive, and the true success is in the labor."

Many believe they are doing research work because they are on speaking terms with the genuine workers and those doing original work. There is no place in our ranks for such as these, none for the dilettante, none for the social lion or for the strategist, who uses the church to further his own ends in his struggle for a practice. The young physician in looking back among his ideals finds some few standing out in the forefront and becomes better acquainted with them than with many others. Among these we may mention Harvey, whose discovery of the circulation of the blood originated the study of physiology, medicine and comparative anatomy; Jenner, whose wonderful discovery was destined to save so many lives and banish smallpox from our midst; Simpson, whose ardent advocacy placed the use of anesthetics on a firm footing and insured to humanity the alleviation of pain; and Lister, whose

> " Faultless patience, his unyielding will,
> Beautiful gentleness and splendid skill,"

introduced the dawn of a new era of Listerism with all its beneficent results.

We all aim to achieve legitimate success, but, unfortunately, of those who enter the race but few attain the goal. Success can only be attained by hard work. Osler defines success as *getting what you want and being satisfied with it.* It is an interesting study to sit down and endeavor to fathom the depths of the minds of the great men who have made a success of their work in the fields of medicine and surgery. Parkes says of Harvey: "When anyone examines into this discovery of Harvey's and gradually recognizes its extraordinary importance, he cannot but be seized with an urgent wish to know how the mind which solved so great a problem was constituted." There was no accident about it; it was worked out and thought out point after point, and it had not been anticipated.

But often when success has been attained, due recognition has been withheld and the worker may become discouraged. When Marshall Hall endeavored to establish his method for producing artificial respiration, the Humane Society looked coldly upon the novel plan and ignored it for a long time. However, a life-saving institution, having so much inherent value in it, forced itself upon the public, and to-day it is universally adopted, and has been the

means of saving many lives, and asphyxia from any cause has been robbed of many of its terrors.

But we admire the humbly great, such as Jenner and Lister. Humble in his tastes, Jenner resented the glare of the limelight; he sought the seclusion of the valley and not the conspicuousness of the mountain-top. He longed for neither fame nor fortune, and had quite enough to satisfy his modest tastes. To him fame was but a gilded butt forever pierced with the arrows of malignancy.

In Vienna, during the first five years of the nineteenth century, 14,600 persons died from smallpox, while in 1804, three years after the introduction of vaccination, there were but two deaths. It was here that Jenner received his first great recognition. Like other prophets, he was without honor in his own country, and it is not to be wondered at that he should receive his first great recognition abroad. He felt that his work was less appreciated in England than in other parts of the civilized world.

But it is not necessary to be a Lister or a Jenner to be a whole-souled, vigorous, intelligent and successful general practitioner. The old-fashioned general practitioner, Dr. McClure, is an undoubted success. He is a man of a very high type, and he walks by the light of his own lamp instead of by the uncertain lustre borrowed from others; he is guided by high ideals and a firm belief that right must prevail. Dr. John Brown, he who has shed a literary lustre on our profession, says of the general practitioner: "Everybody knows the doctor, and a very important personage he is. He brings us into the world and he tries to keep us there as long as he can, and he is with us at that strange last hour which comes to all when we must leave this world. People should trust and obey the doctor; they should speak the truth to him and they should reward him. On the other hand, it is the duty of the doctor to cure his patients, to be kind and true to them, to forewarn them, and, lastly, to keep his time and his temper." But the *beau ideal* of the medical practitioner of to-day is Lord Lister—the man who sent surgeons smiling into the operating room, certain of success. We are daily and hourly offering up our meed of praise to the humble Lister, and only those who remember the pre-antiseptic days, now long since passed, can appreciate to the fullest extent the greatness of his discovery. Modifications may have been made from time to time, but none of these improvements of technique has detracted one iota from the originator of Listerism.

When we look into other fields there are many we may well admire. Surely the man who prevents disease and takes away his own occupation is unselfish to the last degree, and may be regarded as an ideal. We do not pay as much homage as is due to sanitary reformers like John Simon. As a consequence of the work done by the pioneers in this field the state now interferes and

forces health upon the people. Parents and children, employers and employed, vendors and buyers, are alike protected by the state health authorities, and medical supervision is provided in case of epidemics.

The doctor who travels off into the fields of literature can scarcely be considered an ideal, but such men have added lustre to the profession, though few of them have prospered as physicians. It must be acknowledged that a man cannot master two trades at the same time, though Brown advised "the fine confused feeding" of miscellaneous reading and thinking. Anything like a complete enumeration of the medical men who have made valuable contributions to *belles lettres* would fill a volume.

To attain success we must be prepared to accept risks—risk of life, risk of reputation and risk of health. No great success has ever been obtained without labor, without hours and hours of incessant toil. We are in great need of the workers—the reapers are few while the harvest is great. Let it, therefore, be our aim throughout life to assist by every means in our power, by the force of example, by kindly encouragement, the young men who are found willing to work and who do work willingly and well. According to our ideals will be our idea of what constitutes success. There are many paths to the wished-for goal, but it requires the same exertion to travel any of them. There will be obstacles in all paths to be surmounted, and while working hard in one field it is well to broaden the mind by dipping occasionally into other fields than our own, as such a change gives rest, and such a rest is beneficial. The successful man learns rather to act than to speak. Harvey did not make a desirable family doctor, but his mind was of such a mould as often achieves success; while it fitted him for the work in hand it unfitted him for practice.

Away out in the country districts, driving for miles and miles, in daylight and darkness, in good weather and in bad, snatching sleep as best he can, without holidays, without a break, without a minute of life to call his own, works another of our ideals, looked up to by all the countryside as a guardian angel in time of danger. It would seem that he is not a man to be envied, but we know that he has the love and esteem of those to whom he ministers. He is a high type of a successful man; not, however, when judged from a pecuniary point of view, but when estimated as a man who is valuable to his fellows.

"Luckless is he whom hard fate urges on
To practice as a country surgeon;
To ride regardless of all weather,
Through frost and snow and hail together,
To smile and bow when sick and tired,
Considered as a servant hired."

But the poetic muse was mistaken. He understood the work accomplished but did not adequately understand the greatness of the reward.

Of late a mould of commercialism has been spreading over our profession, and it will be necessary for our Academy to give this matter due consideration at an early date. Are we to be commercial, or are we to stand by the splendid traditions of the past? Is the practice of medicine to be continued as a trade and not an art, or as an art and not a trade? The safety of a confiding public demands that the art be uppermost, and that this ideal condition which has existed for so long shall continue to exist. John Brown, who has so beautifully said so much, tells us that "honey is not sweeter in the mouth, or light better to the eyes, or music to the ears, or a warm, cosy bed more welcome to the wearied legs and head, than is the honest, deep gratitude of the poor to the young doctor. It is his glory, his reward. He fills himself with it, and wraps himself all round with it as with a cloak, and goes on with his work happy and hearty. The gratitude of the poor is worth the having, and worth the keeping, and worth the remembering. Brown had attended the wife of Sandy Campbell, and after having met Sandy he went home and wrote that he could see written on Sandy's face the thought, "God bless him, he saved my Kirsty's life," and he could see that he ran back in his mind all those twenty years and laid out his heart on all he remembered, and that did him good, and did the doctor good, too, and nobody any ill." Gratitude is one of those things that people can give, and do give, and are never a bit the poorer, but all the richer. Charity should be written in letters of gold on the brow of every doctor, and what he gives in charity will come back to him increased a thousandfold in the heartfelt gratitude of suffering humanity. His heart should be full of love, and light, and sunshine, and uplifted with the nobleness of his calling.

"The night has a thousand eyes,
And the day but one;
Yet the light of the bright world dies
With the dying sun.

"The mind has a thousand eyes,
And the heart but one;
Yet the light of the whole life dies
When love is done."

Ideals in the Academy.

The work of organizing the Academy has been completed. The committees appointed for the purpose have performed their work faithfully and well, and a foundation has been laid which we hope

will ensure success. A constitution and by-laws have been framed, requiring in my opinion but little change, and it is hoped that only urgently needed changes will be made. As an Academy we know no university, no school, and no circle of medical men. The Academy is for the use of the profession of the city and of the province. Let us sound a note of warning on this point at our inaugural meeting—unity, peace and concord will be best preserved amongst us by a determination to allow the control of no party, whether that party be connected with the university or the outside profession. And in this manner we will be best able to ward off the demons of discord.

Our Academy is yet but an infant, and as the infant grows its requirements will be greater. We must appeal on its behalf to those whose good fortune it is to accumulate wealth and whose noble generosity urges them to use it for the benefit of mankind. While such benefactors will be aiding this Academy by increasing our resources and enabling us to put before the members of the profession that which keeps them in constant touch with the best developments in the profession throughout the world, they will be benefiting humanity in general.

It is essential to the vigorous life of the medical community that free discussion of the all-important problems of life and death shall take place frequently, and that there shall be an exchange of ideas and a comparison of experiences. Here the old must teach the young, and the young may do much to keep the old in touch with the march of progress. "Medicine in the not distant past but held the shadow of knowledge, it now holds the substance; it labored long in hopeless efforts to be of use, it now waits upon humanity with the most brilliant service." Much has been accomplished. The culture tube and the microscope unearthed priceless treasures, and we are now looking carefully into the question of immunity, which, once understood, will be followed by a rational therapy before which the great life-saving discoveries of Jenner and Lister may fade into comparative insignificance. But there are vast fields yet unexplored. Cancer stalks in our midst to-day just as it has done for centuries, and we are no more able to afford relief now than in the past. To meet, to discuss, to learn from one another, and to put forth a united effort we must be organized. The medical profession has always lacked organizing power, the power the Academy should be able to wield in this community. Let the first organized effort be to provide an assembly room for our meetings. In doing this no encroachment should be made upon the small trust fund already established, and no building should be begun until all the money required has been subscribed. I would suggest that committees be appointed to deal with this matter.

We should exact a high standard of conduct, but at the same

time we should endeavor to protect the business interests of our brethren, and to put forth a concerted effort to do away with all abuses that tend to rob us of our just emoluments. Fair fees should be paid for the work done, but they should be properly curtailed in the interests of the best traditions of the profession. The doctor's daughter says that her father does not work for money but for the good he does; but such a sentiment, if idealistic, will not provide her with food and raiment. Most assuredly our first consideration should be for human life and human suffering, and the well-being of the community at large, but, as John Brown says, we must have our reward. Gratitude and honor will not pay the butcher and the grocer. The incomes of our brethren have fallen off of late years, while the necessities of life have increased in cost. Easy circumstances elevate and prevent that blunting of the feelings that is produced by poverty. Charity begins at home. Let us, then, as an organized body, look into this question and endeavor to find a cure. In England it has been taken up by Sir Victor Horsley. The profession appears to be overcrowded from two factors; first, the large number entering the field; second, the greater control of disease owing to improved sanitation. Few of the liberal professions can boast a worse remuneration, and we are putting forth every effort to further curtail our incomes by further curtailing preventable disease. It is our duty, however, to see to it that the food and water supply of communities is sacredly guarded, and here in our own city there is much missionary work to be done in this respect. Pure food and water and effective drainage should be procured at any cost. By unity we can accomplish much.

Peace, gentle peace, is pleasant; but there are "wagging tongues in every parish," and doctors are estranged from one another for life owing to a lack of mutual understanding. New ideas seem to beget ruthless criticism. Such eminent men as Liston and Syme quarrelled most fiercely after being close colleagues. While we exhort the members of our profession to dwell together in peace, we do not ask them to sacrifice principle for the sake of peace. Our Academy, we hope, will promote harmony. Having reached the half-century mark, and having fought many fights, I am convinced that infinitely more good may be accomplished by the ways and means of peace. Let the methods adopted to attain our ends be manly and above board, so that the practise of our profession may indeed be an honorable calling. Bickering is said to originate with the older men. Be this as it may, it would be the ideal part of the younger men in all quarrels to keep their own counsel in the interests of peace. Envy has been called the shadow of success, and detraction the echo of its voice; but envy, so common to the human race, might wisely be buried in the deepest recesses of the heart and be known to none but its unfortunate pos-

sessor. Fellowship should actually mean what it implies; a spirit of comradeship should prevail, and if we cannot become close friends we can at least remain loyal comrades. Women have entered the lists as friendly rivals, and perhaps formidable ones, but they should be received on terms of equality. Reciprocity in medicine is no doubt an ideal condition, but in the overcrowding of the profession we have its chiefest stumbling-block and the strongest argument against it under existing circumstances.

The well-being of our profession in Toronto has been discussed from time to time by one who has been particularly interested in the formation of this Academy. We have benefited by his kindly encouragement, advice, and princely generosity—I refer to Professor William Osler. From him I do not hesitate to take the text with which I intend to conclude my address. This is the first presidential address delivered to the fellows of the Academy of Medicine, Toronto, and the text appears peculiarly appropriate—it is a plea for *Unity, Peace and Concord,* so necessary if we are to achieve any distinct success. If on this occasion we followed the customs of a well-known English medical society we would commemorate by name not only one but all of our benefactors, and would urge others to follow in their footsteps; we would exhort young practitioners to carry on original research, and, finally, we would beseech all the Fellows of this Academy to continue in unity, peace and concord.

Ten years ago when Lord Lister visited our city he told us that the scientific investigation in which he had been engaged for the greater part of his life had been to him an unmixed joy, and when he was able to see the results of his work his joy was increased a thousand fold. What a magnificent reward! Let us hold up these rewards before our young men to encourage them to emulate Lister and others of like aim. As an Academy we will be judged by the work we do, and let us therefore hope that the work accomplished will fulfil the most sanguine expectations of the most sanguine Fellow present.

THE TREATMENT OF TUBERCULOUS ARTHRITIS.*

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The tuberculous nature of certain forms of arthritis was recognized nearly a century ago, yet the clinical picture which permitted an accurate diagnosis, at all events in the early stages of the disease, was not clearly defined until a comparatively recent date. A paper read by Croft and the discussion which followed before the Pathological Society of London in 1881 indicates the doubt which then existed regarding the true nature of these joint affections. The paper was accompanied by excellent drawings by Greenfield, illustrating the histological character of true tuberculous joint lesions, and, after viewing these drawings, one may be surprised at the uncertainty which continued to prevail, until one recalls the fact that it was not until the following year (1882) that Koch published his discovery of the essential etiological factor in the development of tuberculous disease, when he demonstrated the specific bacillus, and among other tissues of the body found this organism in affected joints. Previous to Koch's discovery the continental surgeons had been insisting that tuberculous arthritis was a common affection, and this led Croft twenty-five years ago to express some doubt regarding the hostile attitude of his colleagues towards this creed by exclaiming, "Are English surgeons wrong and German surgeons right? Is tubercular disease of the joints more common than we have supposed?"

I mention this historical fact to show that there is excuse for the somewhat frequent change of attitude of surgeons in recent years towards the question of the treatment of tuberculous arthritis because here, as in other similar questions, the method of dealing with a particular lesion in the tissues of the body is modified necessarily by an accurate knowledge of the pathology of the disease, and consequently the purely empirical methods of treatment give way to those established upon a true scientific basis. Koch's discovery was the signal for the establishment of a series of investigations which are still in progress and which we believe are by no means yet carried to a final issue, and, in the future, we must ever modify our treatment as we learn more of the conditions under which the bacillus thrives in the human tissues and is

* Read at the meeting of the Canadian Medical Association at Montreal.

capable of producing and maintaining the lesions with which we are familiar.

A few years ago a prominent British surgeon advanced with great persistency the teaching that tuberculous disease of the joints (more particularly in the hip) should be eradicated by operation as soon as one was able to make an accurate diagnosis. Many surgeons adopted these views and nothing can better illustrate the way in which we are influenced in our procedure by the results of experience and by more accurate knowledge of the progress of disease in the tissues, than by observing the practically universal abandonment of that doctrine, and within the last decade we have come to recognize that in hip-joint disease the best results are obtained by conservative non-operative methods; on the other hand the exceptional conditions under which operative measures are demanded are becoming much more clearly defined. After an experience extending over fifteen years in connection with the Hospital for Sick Children in Toronto the writer has had considerable opportunity for observing the results of treatment in these cases. The evidence is all overwhelmingly in favor of conservative treatment, rest is secured by efficient splinting and the patient is placed in the best possible hygienic surroundings.

In connection with the Hospital for Sick Children in Toronto there is an institution known as the Lakeside Home, which is situated on the shores of Lake Ontario on Toronto Island. This institution provides the summer quarters for the patients of the City Hospital. In the Lakeside Home is extensive verandah space off each ward, so that tuberculous patients are able to live practically in the open air. The progress made by such patients who, in addition to fresh air, get good nourishing food and careful nursing, is very marked. Not infrequently a serious case of tuberculous arthritis in the City Hospital is with difficulty tided over the winter and early spring months, with perhaps little prospect of improvement: when such patients are transferred to the Lakeside Home the critical stage is often passed with safety, and recovery, which had hitherto been doubtful, is ensured. In this institution, therefore, we have a graphic illustration of the benefit of open-air treatment of tuberculous arthritis.

In conjunction with other conservative methods, Bier's treatment of inducing hyperemia by bandaging is of undoubted value and may be employed with great benefit in many cases. One may also refer to the use of Wright's tuberculin, which is at present extensively used by some, but with varying effect. In the Hospital for Sick Children, Toronto, it is being tried at present, but it is too early to speak of the results.

Whilst thus advocating in general the conservative non-oper-

ative treatment of tuberculous arthritis, we recognize also the fact that operative measures are not infrequently indicated. Where the conditions are becoming progressively worse in spite of efficient conservative treatment, operation may often be undertaken with advantage. Among other circumstances, the question of operation and the method of its performance is affected by the age of the patient and by the particular joint of the body which is the seat of disease.

Abscess may develop at any stage in the course of a tuberculous arthritis. It not infrequently forms before the cavity of the joint has become invaded by disease. The most important fact to appreciate respecting tuberculous abscess is that it very often forms the medium by which a purely tuberculous arthritis is converted into one of mixed infection. Then, in turn, it is to be noted that when mixed infection occurs we see the most disastrous results of tuberculous disease. When, for example, a pyogenic infection is engrafted upon a tuberculous one, then destructive processes very rapidly lead to conditions which often endanger the life of the patient, or, short of that, may necessitate the sacrifice of a limb or the loss of function of a joint.

The method of formation of a tuberculous abscess may readily be studied. The central portion of a mass of tubercles caseates and becomes necrotic because, being an extra-vascular process, the nutrition of the centre of the mass is ill-provided for. This caseous centre becomes liquified by the effusion of serum into it. The serum contains leucocytes, but not so many as in the pus of an ordinary septic abscess. The abscess spreads by fresh tubercles developing in the periphery and invading the surrounding inflammatory area where more or less fibrosis has occurred, whilst the older tubercles break down and caseate and the fluid in the centre increases in amount. The pus of a tuberculous abscess thus contains as structural elements a varying amount of necrotic debris, which has become detached from the wall, and a few leucocytes. The abscess usually spreads in the direction of least resistance and is often confined in its course between fascial planes.

For the purpose of treatment it is necessary to recognize the various layers of which the wall of such an abscess is composed. There is an outer zone of fibrous tissue, then a zone of actively-growing tubercles, lastly, caseous and necrotic material which immediately surrounds the cavity containing pus. It is also necessary to observe that the pus of a tuberculous abscess is sterile in most instances, but occasionally the bacillus of tubercle may be found therein. This pus, however, forms an excellent culture medium for the growth of pyogenic organisms, and hence such an abscess when opened may readily become the seat of a

mixed infection. It is this circumstance that makes abscess formation in the course of a tuberculous arthritis so grave a complication, because once mixed infection has occurred, and we no longer have to deal with a purely tuberculous process, there is induced a septic condition which soon leads to destructive inflammation of a most serious and usually extensive character. This, in fact, forms the most fatal complication of tuberculous arthritis.

The chief object in view, therefore, in the treatment of tuberculous abscess is to prevent mixed infection, and if this is accomplished, then its presence does not add materially to the seriousness of the case. Operative interference is not always indicated, because these abscesses occasionally disappear spontaneously and in such cases the course of the disease is in no way affected by its development. When, however, the abscess is observed to enlarge progressively, and more particularly when it tends to approach the skin or mucous membrane, then operation is indicated.

The operative treatment consists in the incision of the abscess. This must be carried out by cutting into its cavity at point which is not dependent and the incision so placed that a considerable thickness of tissue is cut through before the cavity is reached. One must not open at a point where the abscess has approached the skin, else failure to prevent mixed infection will undoubtedly occur, chiefly in consequence of the fact that the wound will not heal by primary union. After evacuation of the abscess contents the wall is thoroughly curetted; a flushing scoop is useful for the purpose. A piece of iodoform gauze is then seized in a pair of artery forceps and being carried into the cavity is rubbed vigorously upon the walls, so as to further curette and remove what debris remains. This process should be repeated several times, until a smooth, firm wall, free from caseous material, remains. The cavity may then be flushed out with sterile water. The wound is carefully stitched up without drainage. The deeper parts of the wound may with advantage be closed by absorbable suture, and, if thought necessary, several layers of suture may be introduced, the skin being closed with horse-hair, and an antiseptic dressing secured by a bandage applied so as to apply equable pressure over the site of the collapsed abscess. The greatest care must be taken with the antiseptic technique. Occasionally the cavity fills up and leakage occurs, the line of incision breaking down; when this takes place a second curettage may often secure a successful result. The desired end may even be obtained after a third operation, but if a culture from the cavity at any time shows the presence of a pyogenic organism it is useless to persist; when this is the case efficient drainage must be provided from a dependent opening.

The writer has employed this method of treatment for the past ten years. One patient who developed a very large abscess in hip disease was treated in this way six years ago. The incision healed by first intention and there has been no recurrence. Another patient two years after the onset of hip disease developed an abscess which approached the surface on the outer aspect of the thigh. It was opened and treated and it healed by first intention. Ten months afterwards another abscess developed on the inner aspect of the thigh; this was treated in similar fashion, and it also healed by first intention. It is now three years since the last operation and there has been no recurrence and the child is now going about without a splint.

My colleague, Dr. C. L. Starr, has reported recently fifty-five cases treated in this way at the Hospital for Sick Children. Seven of these broke down after being sewn up and forty-eight as far as could be traced have remained perfectly closed after periods varying from four months to six years.

It would appear that the method of treatment which I have advocated has not proved successful in the hands of all those who have tried it. This fact provides a good excuse for referring to a form of treatment which was suggested some years ago and which is to-day practised so efficiently by many surgeons. It may be wise to enquire into the possible cause of failure. A surgeon can only speak with certainty of his own experiences and one may positively assert that if one's results were only half as good as they are, it would still be justifiable to advocate this particular method of treatment, because it affords the most certain means of preventing mixed infection, recognizing the fact that such infection is almost invariably produced sooner or later after a drainage tube is introduced into an abscess cavity. The writer would even go further and assert that in his opinion the insertion of a drainage-tube into a tuberculous abscess is wholly unjustifiable. Failure in obtaining the ideal result is undoubtedly sometimes due to the fact that the abscess has been allowed to approach the skin too closely; under such circumstances it readily becomes infected and is probably already septic before operation is undertaken. Then again the choice of locality for the incision is important; it must not be dependent and it must be carried through considerable thickness of tissue.

Excision of a joint or a less extensive operation is sometimes called for. Where, for example, in spite of efficient conservative treatment, the disease makes progress and serious destruction of joint structure is threatened, or where constitutional symptoms become grave, operative measures are necessary. In long-standing cases, too, which have become septic and where sinuses exist we must provide free drainage and this occasionally involves an

operation, possibly a complete resection of the joint. In desperate cases amputation may be necessary, as holding out the best prospect of saving life.

When the question of operative interference comes up for discussion one cannot lay down definite directions for guidance from a general standpoint, as one must be guided not only by the extent of the disease but also by such circumstances as the age of the patient, the particular joint affected, etc. For example, if disease in the knee joint is to be eradicated in a growing child, one would invariably prefer an arthrectomy rather than a complete excision, so as to preserve, if possible, the epiphyseal cartilages and so interfere to the least possible extent with the growth in length of the bones and thus provide against an undue amount of disparity in the length of the limbs. In the adult, on the other hand, complete excision is preferable, carried out in such fashion as to secure complete bony ankylosis of the femur to the tibia. Excision of the hip is sometimes necessary, but the functional result is not as a rule good; it is always advisable to avoid removal of the head of the femur if at all possible. Ankylosis may occur at the hip joint and if a faulty position of the limb has been assumed it may be necessary to perform osteotomy to improve function. The writer has had occasion to do osteotomy of both femora in double hip joint ankylosis.

In general, again, it may be stated that operation is more frequently performed in the adult than in the child, because in the former case it is often impossible to secure adequate treatment over a period of years, such as may be necessary to effect a cure by conservative treatment. An adult may not be able to afford the necessary time, and therefore operation is justifiable to secure a more speedy convalescence.

In cases of definitely localized areas of disease, where conditions progress unfavorably, it is often possible to remove these foci without opening the articular cavity. This is more particularly the case in the knee, and more rarely in the region of the hip. I have succeeded thus in removing disease from the lower end of the femur and the upper end of the tibia. In one case I removed disease from the femoral neck by tunnelling through the great trochanter.

The results aimed at, as to whether or not one desires to secure a movable joint, will, of course, vary with the joint affected Thus, at the elbow one wishes mobility, and, in my experience, a most useful joint result may be obtained after excision, but in the knee, on the other hand, where stability for purposes of sup port are so essential, firm bony ankylosis is aimed at.

I may conclude this paper by referring to certain cases in my own practice which I have been able to follow up so as to record

the results of operation as observed some years after treatment by such means.

Complete *excision* of the knee joint is an operation which, when successfully carried out, secures a good functional limb with, of course, a stiff joint.

A boy 11 years of age developed knee joint disease, and eighteen months subsequently had a tuberculous abscess, which was opened and drained. Mixed infection followed and several sinuses formed. He was kept on expectant treatment for eight years, during the latter four of which I saw him from time to time. Whilst a cure was not effected, yet one managed to tide him over several years without inducing the shortening which would have been produced by interfering with the epiphyses. The disease now, however, progressed to complete disintegration of the joint, and his general health was suffering, so that when he was 19 years of age I performed a complete resection of the joint. The tissues about the joint were riddled with sinuses, so that it was impossible to obtain primary union, but bony ankylosis was eventually secured with closure of the sinuses. The result of this operation may perhaps best be appreciated by noting that eighteen months after the operation he was able to swim a measured mile; he then had 3 1-2 inches of shortening. He has remained in excellent health since and has a good useful limb to-day; it is now eight years since the operation.

A second case of complete resection was performed by Kocher's method on a man 28 years of age, who for fifteen years had suffered from tuberculous trouble in the knee. In this case there had been complete disintegration of the joint structures, with an abscess in the head of the tibia; no open sinuses existed. Primary union was secured and perfect bony ankylosis. Three years subsequently the patient when he presented himself for examination had one inch of shortening; he weighed 200 pounds and was in excellent health. These conditions exist to-day, seven years after operation.

A third case illustrates the excellent results which may be obtained under apparently very adverse conditions. The following is the history, briefly narrated:

January, 1900.—Trouble in the right knee began, the patient being 20 years of age. May, 1901.—Orchidectomy for right tuberculous epididymitis. September, 1901.—Hard nodules detected in each lateral lobe of the prostate. September, 1901.—Complete resection of the knee joint. January, 1902.—Tuberculous stump of right vas dissected out. February, 1902.—Induration noted in right seminal vesicle. April, 1903.—Orchidectomy for left tuberculous epididymitis.

At the time of the resection of the joint the anterior pad of synovial membrane was greatly thickened and pulpy and contained a small pocket of pus; the semilunar cartilages were

destroyed and the articular cartilage over the femur and tibia completely eroded. There was a large pocket of pus behind the tibia, extending three inches down the calf. The patella was also eroded. The wound healed by primary union. One year after he was walking with comfort with one inch shortening, and to-day, six years after the excision and four years after the last orchidectomy, he is in apparent excellent health and has a good useful limb.

The case further illustrates the fact that the existence of multiple lesions is not necessarily a contra-indication to operation.

A fourth case may be alluded to, that of a man 28 years of age who had tuberculous trouble in the left knee for seven or eight years. Arthrectomy was performed by Dr. McKinnon, in November, 1902, and the synovial membrane dissected out. In November, 1904, I performed complete resection. The wound healed by primary union and complex bony ankylosis occurred. The patient, however, was unfortunate enough to contract arthritis deformans in a number of joints of the body and is completely crippled thereby. There is some satisfaction, however, in knowing that the limb in which excision was performed is the one in which he has most complete comfort under the trying conditions from which he now suffers.

A fifth case required a somewhat unusual operation, namely, excision of both knee joints. A child 8 years old came under my care, with a history of tuberculous disease which had been contracted in infancy. The child had never walked and there had been absolute neglect, so that extreme flexion had occured, with ankylosis. I performed complete resection of the knee in each extremity and obtained bony ankylosis. Here the shortening will not be of material moment, as there will probably be no disparity in the length of the limbs, both sides having been dealt with by similar methods.

The operation of *arthrectomy* in young subjects suffering from tuberculous disease of the knee joint is, as a rule, attended with good results.

The first case of this nature to which I refer is that of a child 11 years of age, with tuberculous disease in the knee joint, accompanied by one inch of lengthening. There was no improvement under expectant treatment and I performed arthrectomy, dissecting out the anterior portion of the synovial membrane, which formed a pad of gelatinous consistence fully one inch thick. The articular cartilages were eroded in spots and were curetted along with a cavity in the external condyle of the femur, and another in the head of the tibia. The wound healed by primary union. The operation was performed nine years ago and he has had no trouble since.

The second case of arthrectomy was that in a child 12 years of age. Disease had existed in the right knee for four years previously and had progressed, in spite of efficient splinting. There was one-half inch lengthening. In March, 1900, I opened the joint by Kocher's method and dissected out the diseased synovial membrane. The semilunar cartilages had been destroyed and were unrecognizable. The crucial ligaments were dissected out. A cavity in the outer portion of the head of the tibia was curetted. The wound healed by primary union. Seven years after the operation she was examined by me. There was complete bony ankylosis, with about half an inch of shortening. The patient is a laundress and stands all day at the wash-tub. In addition, she walks from three to four miles twice a week delivering the laundry work.

A third case of arthrectomy was that of a child 5 years of age in whom I performed arthrectomy of the left knee joint for disease which had existed for eleven months and was progresing unsatisfactorily. The diseased synovial membrane was removed and cavities curetted in the tibia and the femur, the articular cartilages being eroded. The wound healed by primary union, but two months after the operation the child was unfortunate enough to contract laryngeal diphtheria, from which she died.

A fourth and last case may be noted to show that arthrectomy may sometimes be performed with advantage in the adult, in preference to excision. The patient was a man 50 years of age, with disease in the knee joint, which had existed for seven or eight years. In April, 1903, I dissected out a diseased synovial membrane and removed diseased portions of the semilunar cartilages. There was no indication of bone disease. Six months afterwards a tuberculous abscess developed in the internal femoral condyle and this was opened and curetted. Healing by primary union occurred after each operation and to-day (four years after this treatment) the man enjoys good health and has a useful limb, with ankylosed knee joint.

Extensive operations upon the knee joint must not be undertaken with impunity. After excision of the joint the shock is extreme and the patient is placed in a condition which must be recognized as critical. Hemorrhage at the time of operation must be controlled with great care, but the writer would urge the advisability of proceeding without a tourniquet. In the cases narrated this has been the invariable practice, all bleeding points being secured as the vessels were cut. It is true that a bloodless operation may be conducted with a tourniquet, but the subsequent oozing, because of vaso-motor paralysis, induced by the pressure of the tourniquet upon the nerves, is so great and is maintained for so long a period, that it induces a far greater loss of blood

than is the case where the operation is conducted without a tourniquet. The only fatality I have had in my series of cases was in a child, whose case I have narrated above, where death was caused two months after operation from laryngeal diphtheria. This result, of course, could not be attributable to the operation.

Where operation becomes necessary in tuberculous disease of the ankle joint, the most satisfactory operation is excision of the astragalus. This may be done by Kocher's method, which gives free access to the joint and permits a most satisfactory survey of all the joint structures, so that all diseased tissue may be removed. One would always prefer resection of the astragalus to excision of the ankle joint, as a much better functional result is secured.

ON ACID PHOSPHATIC MEDICATION.

BY A. HITT, M.D., BERKELEY, CAL.

BOUCHARD has said that no cell can even exist without phosphorus, for phosphorus is universally found in all animal life, either as mineral phosphates or in organic glycerophosphoric combinations, as nucleo-albumins, nucleins, lecithin, etc., all of which are indirectly derived from phosphoric acid, whether as a phosphatic iron of the hemoglobin, as sodium phosphate in the blood plasma, as a phosphatic combination in the neurons, in combination with manganese in the muscles, or as calcium phosphate in the bones, so that since the acidity of the urine is chiefly due to acid phosphates of sodium, potassium, magnesium, calcium and ammonium, any variation in the proportion of phosphates excreted with the urine must have a direct bearing on the health of the individual.

Whenever the percentage of phosphates excreted in the urine exceeds 0.15 per 100 c.c., there is reason to suspect excessive breakdown of tissue. Our knowledge of physiology teaches us that phosphates of the urine are chiefly derived from alimentary phosphates and where there is a pathological increase, it is of the utmost importance to determine the cause. The phosphorus resulting from disintegration of the protoplasm of organized cellular tissue, apart from the phosphates derived from the alimentary phosphates, however, can only be determined by careful comparison of the alimentary intake and urinary excretions, but the symptoms and history of the case moreover will supplement this abundantly.

The metabolism of the cells of the body are influenced by the amount of free mineral acid, which controls the oxidation and prevents deposits of basic phosphates within the tissues. The acidity of the urine in a normal individual, according to Joulie, of Paris, should be 2.45 expressed as phosphoric acid, and his analysis of the urine of 2,000 patients suffering from a variety of diseases, showed that in the vast majority of cases the urine was hypoacid, since, according to Joulie's estimation of the amount of phosphoric acid in the urine (with calcium saccharate) those showing under 4 of acidity are hypoacid, and those over 5, hyperacid.

The importance of phosphorus in its various organic and inorganic combinations has been well established by the investigations of chemists and physiologists, and although the empirical therapeutic administration of various phosphates, hypo-phosphites, glycerophosphates, organic combinations of phosphorus,

such as lecithin, nuclinic derivatives, etc., has been practiced by at least three generations of physicians, we are only now beginning to understand that such phosphatic medication can only become of real value to the patient under certain conditions.

Joulie, the French chemist, is largely responsible for the light thrown on this question, and a few references to his studies are useful in order to fully understand the arguments which follow.

Joulie's claims are based on the result of years of careful examinations of urine, and have been clinically studied by Cantru, Morel-Lavallee, Alfred Martinet, Launois, and other noted French authorities, with results which establish the superiority of the acid phosphatic medication. Hypoacidity of the urine, depending on oxidation and diminished organic exchanges, modifies the nutrition, especially in arthritic or hepatic cases.

The acidity of the urine is necessary to maintain the solution of the calcium and magnesium phosphates and the calcium oxalate, since when this fluid is insufficiently acid these salts are precipitated in the tissues, giving rise to obstructions in the various organs. On the contrary, when the acidity is hyperacid, the urates are decomposed and uric acid is precipitated, although it is the presence of the normal proportions of acid glycerophosphates which prevents formation of the very insoluble amorphous biurates. The theory of preventing arterio-sclerosis, based on Metchnikoff's reasoning that the lactic ferments liberate free lactic acid in the intestine, or that the same results are obtainable with Bulgarian butter-milk, are only partially successful in increasing the relative acidity of blood, for while the blood may become less hypoacid from the use of these lactic ferments, or by the direct administration of lactic, citric, tartaric, malic, etc., acids, all are reduced to carbonates and water in the laboratory of the economy, and only acidify when sufficiently consumed.

The urinary acidity equilibrium is indispensable in order to prevent disturbances of circulation and certain pathologic conditions connected with hyper or hypoacidity.

In the great majority of urines examined by Joulie, he very rarely found patients with hyperacidity, and 400 analyses of urine made by Bardet, only 15 were hyperacid, and this medical authority concludes that a great number of diseases due to faulty metabolism showed hypoacidity. The analysis of the urine of patients at the Hotel Dieu Hospital, Paris, suffering from chronic diseases, such as tuberculosis, shows that almost all had an alkaline urine. Cantru found out of 80 neurasthenics (dyspeptic or otherwise), that the urine of 7 only were hyperacid, 5 normal, 65 hypoacid, and 3 alkaline.

The most common cause of hypoacidity is the replacement of urea CO $(NH_2)_2$ by ammonium carbonate, since all proteids yield urea by spitting up during the process of assimilation, and this may occur when the liver functions are impaired. The carbonate of ammonium, being carried along in the blood stream, soon determines a general hypoacidity which is a condition favorable to the tubercle bacillus and pathologic micro-organisms which thrive in a distinctive alkaline medium, such as that found in individuals with a hypoacid blood and urine, and this explains the comparative immunity of the arthritics to infectious diseases.

All inflammatory diseases with febrile reaction bring on hypoacidity, since it increases the oxidation. Anemia, polyuria, glycosuria, the alkaline dyspepsias, cancers, scrofula, pneumonia, and all contagious or microbian diseases, show a hypoacid urine, and the same may be said of gouty cachexia, rachitism, nephritis, gravels of phosphates and urates, varicose veins, hemorrhoids, some skin affections and eczemas.

The hypoacidity, in exaggerating the combustion of the economy, brings about an accumulation in the blood of calcium oxalates and phosphates of magnesium and calcium, which, being insoluble, are most easily deposited in all the organs, especially around the nerves and nerve endings, producing by their irritation and resulting inflammation, painful forms of neuritis and leading to arteriosclerosis, nephritis, and deposits in the articulations.

It has been the fashion for some to dispute the absorption of phosphates and phosphorus compounds other than those existing in organic combination, and this is undoubtedly true in a measure, and basic phosphate may even do positive harm by increasing difficulty of assimilation and causing insoluble deposits in the tissue, but a moment's reflection will explain much that has been hitherto obscure. We have been too apt to lean towards alkaline and neutral phosphatic medication, which cannot be taken up for any length of time by the digestive organs. Phosphorus itself is dangerously irritating in any form, the hypo-phosphates are objectionable, for they require oxidation, whereas the addition of sulphuric and hydrochloric merely liberate existing phosphoric acid from phosphates, and phosphoric acid itself, in order to be utilized for cell reconstruction, must first be converted into the organic form of glycero-phosphoric acid, and this can be done in the chemical laboratory and so save the labor of the patient's organs of assimilation. When, therefore, in order to build up new cell tissues phosphorus in some form is necessary to replace waste, the acid glycerophosphates should be prescribed. The acid glycerophosphates, like all hydro-

chloric acid, prevent secondary fermentations in the stomach and thus do away with alkaline mineral waters, bicarbonate of sodium, lithium, etc., which, while giving temporary relief to dyspeptic patients, really aggravate the trouble, since the stomach is then called upon to increase the secretion of the gastric juice, and, by so doing, naturally increases the alkalinity of the blood and hence the hypoacidity of the urine follows. The object of this reasoning is not to dictate what to use in any specific case, but to impress on the intelligent practitioner the advantage of giving, in all cases where cell nutrition is required, the acid glycerophosphates, since the basic phosphates or even the neutral glycerophosphates just as much as the latest fads of the so-called nuclein and organic phosphorus compounds so loudly advertised are probably more harmful than useful. The best pharmaceutical form of administration is the glycerole, a syrup-like preparation made according to Huxley's formula, each teaspoonful of which contains 4 grains of the acid glycerophosphates of calcium, sodium, potassium, manganese, iron and strychnine (1-125th grain), in the physiological proportions in which the glycerophosphates are found in the organism. The dose of Huxley's glycerophosphates is one teaspoonful for adults at meal times, well diluted with water. It keeps indefinitely in any climate.

We have ample provision of organic phosphorus in the proteids of our food, but these require elaboration before becoming available for reconstruction of nervous material for the protoplasm of new cells, so that there is every advantage in administering acid glycerophosphates, which are available for the formation of new structures and re-establishment of normal acidity of the blood and urine and suppression of phosphaturia. These acid glycerophosphates, therefore, assist digestion, and pass into the blood as sodium acid phosphate.

Selected Articles.

TREATMENT OF RHEUMATISM AT CALEDONIA SPRINGS.

Dr. E. S. Harding, in a paper entitled "The Treatment of Rheumatism at Caledonia Springs," and reported in *The Montreal Medical Journal*, April, 1907, writes as follows:

In speaking of the action of the Caledonia mineral waters, it will be as well to pass in review the various salts which they contain. Dr. James K. Cook, in his work on "Mineral Waters of the United States,"-succinctly says that the "most frequent and most important component in all mineral springs is indisputably water." It may seem superfluous to mention the therapeutical action of water, but if there is not an ignorance of its properties, there is undeniably a great lack of appreciation of its merits. I merely mention its action as a diuretic and its power to increase peristalsis when taken cold.

The strongest mineral constituents in the Caledonia waters are the chlorides, the first of which is sodium chloride. The physiological actions of these salts which I wish to emphasize are: The function of regulating the absorption of body fluids and of exudates; the action in the stomach where they combine with lactic acid, liberating hydrochloric acid, thus aiding and increasing the amount of pepsin: the action in the secreting glands of the gastro-intestinal tract increasing the flow of gastric juice, bile, pancreatic juice, and intestinal fluid, promoting appetite, aiding digestion and helping exudation. Therapeutically they are of value in gastric, hepatic and intestinal disorders and especially in atonic dyspepsia.

The most important constituents of the waters, in relation to rheumatism, are probably the alkaline carbonates, which are present as the salts of magnesium, calcium and sodium. Their action is important. Given before meals the flow of gastric juice is excited, given after meals the acidity of the stomach is neutralized. They are quickly absorbed and render the blood more alkaline. They are diuretic, acting directly on the renal epithelium. They are quickly excreted in the urine, rendering it alkaline, and thus increasing its power of holding uric acid in solution. They are recommended in acid dyspepsia, with eructations, pyrosis and flatulence, also in fever, rheumatism, gout, vesical irritation, gastro-intestinal catarrh, engorgement of the portal system, and conditions of uric acid, gravel, and calculi.

Untoward or toxic actions of the waters are occasionally noticed, the principal of which are headache, malaise, constipation, œdema and gastro-enteritis. They are usually caused by taking the sulphur water too soon or in too large quantities, sometimes aided by a too hot initial bath. The person feels a dull, depressing headache with malaise, loss of appetite, furred tongue, feeling of oppression, and bloating. Where there is also constipation, edema may be quite extensive, showing early in the face. The condition is sometimes refractory to treatment. These symptoms, however, are practically never seen where the rules of treatment are carefully followed, and I do not remember of seeing them except at the beginning of a course.

Gastro-enteritis at the beginning or during treatment is far too common, but its cause is not always apparent. The attack is frequently quite severe, and at times almost seems epidemic, but is seldom refractory to treatment. The possible causes are: Indiscretions in diet (both in quantity and quality), the drinking of cold water in too large quantities or too soon after meals, sudden changes in climatic conditions, or the sudden liberation of quantities of uric acid in the system by the alkaline waters and hot baths without sufficient excretion. A mild attack early in treatment seemed to have beneficial after results. A curious result sometimes noticed on drinking the waters is an obstinate constipation. To avoid this a free action must be obtained at the beginning of treatment.

The other important agent in the treatment of rheumatism with mineral waters is the hot bath. The absorption of mineral ingredients in the waters of the baths is generally conceded to be very slight, the therapeutic value being due to the action on the skin and on the circulation. On entering a bath from 95 to 106 deg. F. the first feeling is depression, soon followed by a sense of comfort and relaxation. From mechanical pressure and stimulation the blood is first driven to the internal organs. Then follows increased respiration, quickened pulse, rise of the body temperature, lowering of blood pressure and hyperemia of the skin. The chlorides and carbonates tend to soften the skin and stimulate it, dissolving at the same time the secretions of the sebaceous and sweat glands, removing the adherent epidermic scales and the obstructing masses of secretions. The fatty exudations are saponified, the ducts opened, the capillaries flushed and the glands stimulated. The increased pulse and respiration mean increased metabolism throughout the body, and there is an increased excretion of gaseous material. Brissel has shown that the douche bath has greater effect than a plain one, the changing force of water alternately contracting and dilating the superficial vessels. The same writer has demonstrated that the excretion of

urea and uric acid in the urine was greatly increased by these baths.

In closing I wish to say a word about the future of the Caledonia Springs. They have recently come into possession of the Canadian Pacific Railway Company, and probably no better fate could have befallen them. These springs are favorable for the establishment of a large resort in which to "take the waters," and many benefits could be derived in making them popular. Undoubtedly they rival in many qualities some of the well-known European resorts. It is no slight advantage to have near at hand a suitable place where cases requiring treatment at such resorts can be confidently sent. To gain the confidence of the medical profession it is necessary that the therapeutical or medical claims should receive every consideration. The Springs are primarily a resort for health, and it is to be sincerely hoped that the Company will develop them with this in view. In one way they have already done this by opening a hotel for the winter treatment of cases—a season of the year when rheumatic affections are so common. Establishing a second hotel with lower rates will also bring the means of treatment to a larger class. A word of praise should be given the present manager, who has for years been in touch with the records of the Spring, and who appreciates and considers first the comfort and care of the guests who are there for their health. In the past, guests have been free to use the baths and waters according to their own judgment or according to the abundant advice which is so freely given by friends. This has been detrimental to the best interests of the Springs, and we hope it will soon be changed, and that all will be under medical supervision. Resorts like this soon draw many who are not seeking relief from ailments, but merely distraction or amusements, and some tact is necessary to fuse the different elements. However, no one disputes that the patient has first rights, and I feel sure that his interests will always predominate.

THE MEDICAL MAN AFLOAT.

BY H. SHERIDAN BAKETEL, M.D., NEW YORK.

In the spring, when the fancy of the average young man is said to turn to thoughts of love, the fancy of the average young practitioner just out of the hospital, and the recent graduate who cannot afford the time a hospital course consumes, turns to the very serious and practical thoughts of future livelihood.

I desire to call the attention of this class of men to an opportunity which offers a "living" from the start, and which has many advantages quite unknown in any other avenue of medi-

cine—that of a ship's surgeoncy. All transatlantic and many of the coast liners sailing out of New York carry surgeons, whose business it is to guard the health of the passengers and crew.

Unfortunately, with one exception, vessels of foreign register carry medical officers of their own nationality, but with this handicap to American medical men, there are over forty berths on ships open to our graduates.

Of the transatlantic liners, the American Line, the sole line under the American flag, has four ships sailing out of New York for Southampton, and four out of Philadelphia for Liverpool, carrying American surgeons. These vessels are extremely popular with the travelling public, and offer the surgeon excellent opportunities for clinical work as well as for earning a very comfortable stipend. The Holland-American Line has four large ships running between New York and Rotterdam, which carry American medical men, although the company is distinctly Dutch.

Furthermore, American physicians are employed on these ships: Atlas Line to West Indian and Central American ports, twelve; Bermuda Line to Hamilton, one; Panama Railroad Line to Colon, four; Red D Line to Puerto Rico and Venezuela, four; the New York and Puerto Rico Line to San Juan, four; the Sloman Line to Brazil, four, and the Lamport and Holt Line to Brazil, two.

There seems to be among the medical profession a very general misconception as to the professional attainments of the surgeon on steamships. The idea is broadcast that a ship's doctor is usually a man who failed to make good in practice ashore, or whose habits are such as to disqualify him for independent medical work.

It is unfortunate that such a belief is prevalent, because, as a matter of fact, the average steamship surgeon is as well qualified as the average physician ashore, and indeed many of them are men of the highest scientific qualifications. In the first place, the number of men desiring to go to sea as surgeons is so great that steamship companies are enabled to take their pick. The doctor aboard is not the social butterfly he is generally believed. While here and there there may be found a man who devotes much time to social amenities, the majority only see the passengers at the table over which they preside, and occasionally on the promedade deck. He leads practically the same kind of life as his confrère ashore.

The larger vessels seldom carry fewer than 1,500 people on each trip, and in the busier season 2,500 would be nearer an average number. Each one of these persons can call on the surgeon at any time, day or night. His ailments are the same at sea as on shore, augmented by the troubles peculiar to the sea. If anything, he is more particular at sea than when ashore, and

as a result the doctor listens to more tales of woe in one trip than he would in six months ashore.

The surgeon's duties are confined to certain lines not unlike those of the general practitioner. The bulk of his work is with the medical sick, but he gets quite a bit of surgery, from two to half a dozen obstetrical cases a month, some gynecology, ophthalmology, and laryngology. With so many persons depending on one medical man, it is easy to see that his labors are as varied as those of the physician in private practice. A day's work taken from the surgeon's log on a recent transatlantic trip will give a fair idea of what the doctor at sea has to do.

At 3 o'clock in the morning the doctor was called out of bed to see a steerage passenger in labor. The stewardess, who at one time had been a nurse in an English hospital, had allowed matters to progress considerably before sending for a surgeon. As a result, the woman was speedily delivered of a healthy nine-pound boy. The doctor had just comfortably ensconsed himself on a settee for a nap until the first bugle call, when he was summoned to attend a sailor who had scalded his leg and foot while preparing to swab one of the decks. It was breakfast time before the sailor's needs had been attended to. At 9 o'clock the round of visits commenced. In the forward port hospital was a steerage passenger ill with pneumonia, showing a temperature of 104 deg. F., a steward with acute nephritis, a fireman with epididymitis, and a young boy with a septic hand, which he brought aboard. In the after hospitals, devoted to women, were various cases. A woman suffering with acute mania demanded considerable attention. A young woman with acute oophoritis, an old lady with facial neuralgia, a child with laryngitis, and another with a hard bronchial cold took up some of the surgeon's time. At 10.30 o'clock came the inspection. For an hour the captain, purser, surgeon and chief steward thoroughly inspected the ship from stem to stem. Every part of the vessel from the first cabin to the third class, and from the saloon to the fireman's forecastle, was gone over, and matters of ventilation, cleanliness, and order were taken up, and nothing which did not meet the approbation of the officers escaped their attention. After inspection, the surgeon made his cabin calls, occasioned chiefly by seasickness. Then followed the surgery hour, where twenty-two of the third cabin passengers and members of the crew asked for medical advice. The cases were mostly of a minor nature; coughs, colds, sprains, cuts, and the like, made up the list. Many asked for an "opening medicine," with the result that black draught was liberally given by the hospital steward. The passing of sounds added to the variety of life of one steerage passenger, while another enjoyed the sensation following urethral irrigation. During the afternoon, the surgeon had an opportunity to get a two-hour nap.

Then came the evening hospital calls, and 8.30 o'clock the evening surgery hour. At this time, it was necessary to reduce a hernia and fit a truss. A bad case of varicose ulcer was treated and a couple of stitches were taken in the scalp of a pugnacious Irishman, who had decried England's greatness in the hearing of a loyal Britisher. A fireman, overcome by the heat in the stoke hole, and another with suppression of urine ended the labors of the surgeon for the night.

Such was a day's routine, and happy was the medical man when, on reaching port, he was able to land every person on the ship. Two went to the hospital, but both were "out of the woods" before the vessel again turned its prow homeward.

From this brief *résumé*, it will be seen that the surgeon of the big transatlantic liner is no drone. His working hours are long, and much of his leisure time is taken up in the study and perusal of medical literature, of which he usually has a generous supply. The surgeon's library is ample, and up to date, and his medical and surgical equipment are the best.

The remuneration of the ship's surgeon depends entirely upon the size of a vessel, its destination, number of passengers, the length of the trip, and the condition of the weather. Most of the lines employing American medical officers pay the surgeon about $720 per year, besides all living expenses. In addition, most lines allow the doctor to send bills for the treatment of all ailments not contracted aboard ship. As a result the income of the doctor at sea is far above the reputed average of physicians' income ashore, $700.

The surgeons on the American and Holland-American lines are said to average about $2,500 and living expenses, while the average on the coast-lines above mentioned is about $1,500 and expenses. On the big ships of the White Star Line, like the Adriatic, Baltic, Cedric and Celtic, all of which carry two medical officers, the chief surgeon collects on an average £800 per year. An added advantage is that there is not one cent's worth of expense for office rent, books, instruments, the keeping of horses or automobiles, telephone, and the innumerable necessities which take so large a part of the income of the practising physician.

Again, sea life is less strenuous than life ashore. Night calls, and they are infrequent, can be made without stepping into the air. There are no long drives, no jealous confreres, no backbiting patients. Sea practice is as near ideal practice as can ever be found in this life.

The young medical man who loves old ocean, and is on the lookout for an opening, can do no better than to accept a ship's surgeney (if he can get it), with the feeling that he will not lose caste, for the medical profession has no more high-minded, earnest, and hardworking representatives than those who go down to the sea in ships.—*N. Y. Medical Journal.*

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Editorials.

MEDICAL INSPECTION OF SCHOOLS.

IT has long been recognized by the medical profession that many diseases from which children suffer originate in neglect of hygiene in the schools. The teachers have no time to devote to the study of disease; it is all taken up with teaching in the classroom. Neither is it reasonable to ask from them accurate knowledge of disease. It should be the duty of the medical health

officer to supply that deficiency by an efficient medical inspection.

That was the conclusion arrived at, in 1902, by the Health Department and Public School Department of New York, who joined forces for the same object—the efficient diagnosis and suppression of preventable diseases in school children. For sanitary purposes New York is divided into districts, which are under the control of the contagious diseases department of that city. Each of the districts is under the care of a medical inspector, who is held responsible for its condition. This physician also attends to the medical inspection of the schools in his district. As part of his work each scholar is examined as to his physical condition according to the specifications of a printed card. The height and weight are noted.—heart examined for any cardiac lesion; lungs for any pulmonary disease; lymphatic glands to see if they are enlarged. Defects of sight, hearing, etc., are noted, as indicated by the list on the card. After it is filled up this card is filed in the department of health, a duplicate being left at the school, in charge of the principal, so that the card may be sent with the scholar, if transferred to another school, and it may be known what the condition of the scholar was on entering the school. When an abnormal condition is noted in the scholar, the parents or guardians are notified of it by post card and requested to take the scholar to a physician. This card is a reply card, and, after the physician-in-charge has examined the scholar, he should fill out the card and send it to the assistant chief medical inspector of the New York department of health. If satisfactory, a readmission card, signed by the medical inspector of the school, is issued by the principal. This readmission card is carried by the scholar to his teacher, who allows him to go on with his work.

When disease is suspected by a teacher, he issues a card directed to the school medical inspector or school nurse, asking for a diagnosis or a disposal of the case. This card is returned to the teacher, with the diagnosis and disposal of the case made out by the doctor or nurse. When a scholar is excluded from school on account of a contagious disease, a card is sent to the parents or guardians, notifying them of the fact and informing them that, when free from contagious disease, the scholar may resume attendance at school.

To complete the staff of medical school inspectors, a certain number of nurses are attached to the service. The nurses see to

the cleanliness of the scholars, treat in a special room at the school, when possible, or, at the domicile, pediculosis, itch, impetigo, ringworm, certain forms of conjunctivitis, etc. The usefulness of the nurse, more particularly in treating many of these diseases at the school, is indisputable. The scholar who has itch or ringworm is not sent home, but remains at school without loss of time, and, also, without injury to his schoolmates. Before leaving the school each day the nurse obtains a list of the scholars who have been excluded from school for contagious diseases. These children she visits at their homes, teaches the mothers how to treat them, corrects faults productive of ill-health or contagion, and, in many ways, helps to spread the gospel of hygiene among the poor.

Since the establishment of this system of medical inspection of schools by physicians and nurses, a considerable diminution has been found in the number of cases of contagious diseases in New York, and improvement to the extent of 75 per cent. has been observed in the condition of the scholars.

During the year 1906 the following amount of work was done by 47 nurses in the public schools of New York:

No. of instructions for Trachoma (eye trouble)	180,401
No. of instructions for Pediculosis (unclean head)	706,600
No. of treatments for Eye Diseases other than Trachoma	185,472
No. of treatments for Scabies (itch)	5,757
No. of treatments for Ringworm	18,235
No. of treatments for Impetigo	32,595
No. of treatments for Favus (ringworm of scalp)	2,342
No. of miscellaneous treatments (cuts, burns, bruises, etc.)	61,624
Total treatments (in school)	306,025
No. of visits to homes	42,998
No. of visits to schools	27,097
Miscellaneous visits (not found, stores, saloons and other houses than tenements)	1,708
Total visits	71,803

The present staff consists of 65 nurses. The following cities of the United States have a system of inspection by trained nurses similar to New York, but on a smaller scale. The cities are: Boston, 20 nurses; Baltimore, 5; Los Angeles, 3; Grand Rapids, 3; Jersey City, 2, and Orange, N.J., has one nurse.

The American system of medical inspection of schools is coherent, well ordered and practical. Teachers attend to the instruction of the scholars, physicians diagnose their diseases, and trained nurses treat them. J. J. C.

THE INAUGURAL MEETING OF THE ACADEMY OF MEDICINE, TORONTO.

UNDER very happy auspices the first open meeting of the Academy of Medicine took place last month. It was held in the new Medical Building, Queen's Park. No crowd, no noise, but the all-encompassing charm of geniality, and the pleasant familiarity of the community of spirit incorporated in the word "Fellow." But alack and alas, the one thing needful is now a "Chapter House." The Medical Library is a joy to all, so comfortable, tastefully furnished, and well arranged and adapted for small gatherings, but if the meetings of the Academy of Medicine are all held there we fear often there will have to be an overflow meeting in the hall, at least of those members who are fine and large, but not so fine as a cambric needle. And it will be a weighty matter to have so much dignity "sitting out" the numbers on the stairs. So, Fellows of the Academy of Medicine, it behooves us to set a tune to Kipling's rhyme and "pay, pay, pay." All that the present need demands is a large hall and coat room added to the present library building. We cannot expect it to grow up like Jonah's gourd; but we can keep asking and the project will soon become a reality. To return to the meeting, the first part of the evening was devoted to the presentation of two portraits, to Dr. Reeve, Dean of the Medical Faculty of the University of Toronto, and President last year of the British Medical Association, given by the Executive of the Toronto Branch of the British Medical Association, and to Dr. Nevitt respectively. The latter portrait was presented to Dr. Nevitt by the former Faculty and graduates of the Woman's Medical College, of which he was Dean. The College is of the past, as the women medical students now attend the University of Toronto.

Mr. Irving Cameron presented Dr. Reeve's portrait gracefully, it goes without saying, for Toronto medical men are justly proud of their Bishop of Medicine, and all feel alike that Mr. Cameron has elevated the standing of Canadian physicians and surgeons both at home and abroad by his personal dignity of deportment and expression. Dean Reeve received an ovation as he arose to accept the portrait; feelingly and with a shy reluctance, which is ever a part of his very fibre, he accepted the gift, but to

present it to the Academy of Medicine. He always gives, he gives with his whole heart, and life has never been to him "a having and a getting," but ever "a being and a becoming."

Dr. Duncan, one of the sturdy old Brigade who did so much for the Woman's Medical College in years gone by, presented Dr. Nevitt with an address and portrait. The address was reminiscent and graven in script, "illuminated," the old College on Spruce street and other views of "yester year" adorning the pages. The portrait was unveiled by Dr. Augusta Stowe Gullen, whose aim has been to uphold and strengthen the hands of the medical women of Canada, and no task has been too arduous nor burden too heavy for her buoyant spirit and stout heart to learn or to bear for the sake of her medical sisters. The artist (Mr. Forster) has very characteristically "posed" his subject, restfully sitting in his big arm chair, not in the least looking as if life's duties were all finished, but rather as if a few of "life's guerdons had been won." The artist (Mr. Harris, of Montreal) has not been so happy, unfortunately, in Dr. Reeve's case, in either pose or expression. It seems strange that a student of men should choose to "cut up" such a subject (only head and shoulders are represented). Richard Reeve is a unit in physique as in character. The well and tensely poised head, the straight, lithe body, the long, thin fingers, and the quick, forward movement and alertness should have been suggested (they make the perfect whole of the man), and the trick of smiling with his eyes while his lips retain their lines of firmness, when appreciating a quiet bit of drollery, has been entirely missed by the artist. In the galleries abroad, when glass is put over "an oil," we have always noticed that the portrait is sunk very deeply in the frame with a wide space between the canvas and the glass, possibly to prevent that cold, grey look that glass always imparts. Dr. Reeve's portrait is framed with the glass almost as closely applied as is usual in the case of an ordinary photograph. Standing around the portrait after the ceremony, we heard the question asked, "Why the glass?" and a very Scotch voice answered, "For preservative purposes seemingly!" Do let us take no thought for a to-morrow, a hundred years away we hope, but clasp the active, respected, still youthful Dean in the arms of the delightful present and — break that glass.

We have not tarried too long in the realm of art, we hope, to

pay a tribute to Dr. J. F. W. Ross, the President of the Academy of Medicine. His address was so well delivered in his clear voice, well-chosen English, and concrete sentences and paragraphs, that it was not only a pleasure, but a privilege to listen to him. We thank him for the opportunity of giving our readers his address in this issue.

His address, in our opinion, was an inspiration, a standard, and a goal not far from the ideal for the Fellows of the Academy of Medicine to attain unto, to maintain, and to achieve. First as individuals, lest there be too marked a distance in the degree of glory of the stars, and as a unit for peace, good-will and the advancement of science in the field of research in the hope that Canada may yet, as a nation, speak to a nation and tell of something new.

W. A. Y.

THE REPRESSION OF TUBERCULOSIS IN IRELAND.

To assist in the repression of tuberculosis in Ireland is a task of great magnitude; but, withal, one which should enlist the best efforts of all classes of the Irish population. The Irish race abroad, as well as at home, is deeply interested in this question. Even in America, where hygiene is better observed and where the food supply is more abundant than in Ireland, the Irish have a very high death-rate from tuberculosis, almost double that of the Bohemians, who come next on the list. The Hungarians, Russians, and Poles, who are nearly all Jews, show a very low death-rate, according to the United States census. It is pleasing to learn that, at the opening of a Tuberculosis Exhibition in Dublin, October, 1907, a general interest was taken in the proceedings. The actual promoters of the Exhibition were the members of the Women's National Health Association, of which Lady Aberdeen is President. At a conference, held by Lady Aberdeen, October 11th, 1907, in one of the buildings of the Dublin International Exhibition, diagrams were exhibited showing that, as compared with England and Scotland, Ireland's position is unsatisfactory and discouraging. According to one of the diagrams, the deaths from tuberculosis in Ireland, in 1906, amounted to 11,756, a figure much in excess of the gross mortality resulting from any other disease in that year. The ob-

ject of the exhibition, Lady Aberdeen explained, was to offer an object lesson to everyone in Ireland, and that everyone—all classes of men and women, people who were in positions of public authority, mothers in their homes, teachers,—everyone, as well as the medical profession, should join in the effort to stamp out this disease. The Exhibition would go to Belfast, and, no doubt, there would be invitations to send it north, south, east and west.

In the evening of October 11th, there was a well-attended meeting in the lecture hall of the Royal Dublin Society, under the presidency of the Lord-Lieutenant, Lord Aberdeen, when Dr. William Osler, Regius Professor of Medicine at Oxford, delivered an address on, "What the Public can do in the Fight against Tuberculosis." As an illustration of the victory of human efficiency, the lecturer gave the abolition of typhus fever, which, he said, was due to the efforts of the physicians of Ireland. Until a decade ago, typhus ravaged the country. From 1871 to 1880, there were 7,495 deaths from typhus fever in Ireland. In 1905, there were 68. Not only typhus, but typhoid fever, had gradually disappeared. Dr. Osler also showed that the conquest of malaria had been accomplished by hygienic work founded on medical discoveries. Dr. Osler thought tuberculosis was a disease about which they might have the fullest possible measure of optimism, just as full as about typhus fever and typhoid fever. The cause of the disease was known and it could be picked out as easily as a beechnut could be picked from other nuts. The two sources were from persons with tuberculosis and from the milk of tuberculous cows. The disease entered the body through the breath or it was swallowed with food. Describing the conditions which favored the growth of tuberculous seed in a body, the lecturer said there were three "bads," bad food, bad air, and wretched habitations and improper methods of living, and bad drink—alcohol. The great majority would not get tuberculosis if they warded off those three B's and did not cultivate the soil proper for its growth. Then they had learned how to recognize the disease, just by the distinction of the germ, and they knew how to prevent it if they could only get the people to help them in it, and by making the soil unsuitable. They had also learned how to prevent it, if they could only get the people to help them not hereditary.

In endeavoring to suppress tuberculosis in Ireland, where one-sixteenth of the entire number of deaths in 1905, viz., 12,000, were due to tuberculosis, a great campaign should be instituted. First, came compulsory notification; second, control of the cases, as far as seeing that measures of disinfection were attended to, particularly disinfection of a house after the death of a patient, and, most important of all, control by the public health authorities of the hovels in which some of the people lived. The third great thing was the proper care and cure of cases. He advocated separate wards for advanced cases and sanatoria for fresh ones. Sanatoria should be cheap structures, which they could afford to burn down every fifth or sixth year.

Dr. Osler closed a most practical address by inculcating the necessity of enthusiasm and perseverance in furthering the work of repressing tuberculosis in Ireland.

His address should be widely circulated in Ireland, in America, and Canada, too, and it is to be hoped that the quick-witted Irish will meditate on the doctrines he teaches and lay them to heart. J. J. C.

NEW HEADS FOR THE VARIOUS MEDICAL AND SURGICAL DEPARTMENTS AT TORONTO GENERAL HOSPITAL.

The Committee of the Board of Trustees of the Toronto General Hospital, on staff reorganization, met on December 6th, at the City Hall. For thirteen months the Committee has been working on the reorganizing of the staff.

The second interim report of this Committee was presented to the Board on Dec. 16th, and carried without amendment. The report is as follows:

"Your committee recommends that the senior professor in medicine and the senior professor in surgery in the University of Toronto shall be *ex-officio* members of the active staff of the Hospital. In the event of these professors being heads of services in the respective departments of medicine and surgery in the hospital, they shall be subject to such regulations as apply to the heads of services, but at the termination of their terms of service as such heads, they shall continue as *ex-officio* members of the active staff.

"With regard to the headship of the services in the several departments, your committee makes the following recommendations:

"(1) That Drs. A. McPhedran, W. P. Caven and G. Chambers be appointed as heads of the services in medicine.

"(2) That Mr. I. H. Cameron, Professor of Surgery in the University of Toronto, be appointed, *ex-officio*, a member of the active staff of the hospital, and that Drs. C. Bingham, A. Primrose and H. A. Bruce be appointed as heads of the services in surgery.

"(3) That Dr. J. F. W. Ross be appointed head of the service in gynecology.

"(4) That Dr. Kenneth McIlwraith be appointed as head of the service in obstetrics.

"(5) That Dr. Geo. McDonagh be appointed head of service in the ear, nose and throat department.

"(6) That Dr. R. A. Reeve be appointed head of the service in the eye department. With regard to this recommendation your committee considered it in the interests of the hospital to infringe on the rule as to age limit adopted by the Board, by reason of Dr. Reeve's special qualifications for the position. It is recommended, however, on account of such rule, that the appointment, if made, shall come up for special consideration annually."

We offer congratulations to the newly-appointed staff of the Toronto General Hospital.

Some have achieved greatness, but the general consensus of opinion in medical circles is that one or two have had greatness thrust upon them. The day's work, however, will soon tell the tale, and all the men who give freely of their time to hospital work deserve encouragement and at least a little more praise than "scant justice" meted out to them, for, let they who are in "the inner ring" remember, that those to whom has been given much (of opportunity), of them shall much be required, often at great personal sacrifice. Little wonder, then, that one of Toronto's surgeons, upon being congratulated on his hospital appointment, exclaimed, "I am not sure but that I should have received cards expressing 'condolence.'" He had measured up and understood only too well what was expected of him.

Though up to the time of writing we have not received the official list of assistants, the appointments, we understand, are

to be fittingly made in respect to numbers, that is, not too numerous, as often in big undertakings what is everybody's business is looked upon as nobody's concern and receives little special attention.

The great sick-room of this large city, outside the Hospital doors, is also to be congratulated, for the experience and skill of most of the old family physicians of name and fame, and the old "blue bloods" of Trinity School of Medicine (an institution that has not received the consideration it deserved), are still theirs to command. W. A. Y.

"A. B." AND THE RECENT HOSPITAL APPOINTMENTS.

It is the general opinion in University circles, and especially in connection with Hospital matters, that the *MacCallum* and *Bruce* tartans cannot march shoulder to shoulder. The feud between the two clans has been in existence for some little time, notwithstanding the echo of the *Bing-Bing* of the *Cameron* Highlanders, accompanied by the softening influence of the *Primrose*. There has undoubtedly been too much heard from the Laboratory of Physiology in the University of Toronto of recent years, and we are glad that the pibroch of the *Bruce* clan has re-echoed from the hilltops of the Queen's Park, putting to silence the bagpipes of the *MacCallums*, and, as in the days of the Scottish Reformation "The Bloody Claverhouse" had himself to kiss the dust, he who was given the right at the baptismal font to use initials appearing in the forefront of the alphabet should now be willing to occupy more of the background and resign his too long held post of military dictatorship. W. A. Y.

EDITORIAL NOTES

Acne Rosacea and Erythema Indicate Gastro-Intestinal Sepsis.—There is comfort for the patient with the rubicund nose, even though the dietary recommended be not to his liking. Dr. Lercdde reports (*Revue Pratique*, May, 1905), that in many cases of acne rosacea, he has obtained good results from vegetarianism. As an addition to the strict vegetarian diet, he allows two fresh eggs a day and mild cheese. Wine is to be replaced by water. On this treatment, eight out of ten cases have been benefited; improvement is generally apparent in a month, and is marked in two or three months. Dr. Savill reports, in "Lectures on Neurasthenia," the results of treatment in two cases of cerebral neurasthenia; one case with a flushed (almost bloated-looking face), and the other with advanced acne rosacea. The patient who had the bloated face, a single lady of thirty, had a huge appetite, a long history of intractable constipation, a dropped kidney and cardiac dilatation. The cerebral neurasthenia (melancholia), and the flushed face after meals had started about the same time. She was placed in a nursing home, treated with Schott movements, a rigid dietary, electricity and other methods, and, at the end of six weeks, joined her people in the country, and ultimately made a perfect recovery. The second case, the wife of a doctor, had been regarded as melancholic, and had been in several asylums. Her face represented an advanced degree of acne rosacea, which is found in many cases associated with gastro-intestinal sepsis. After six months' treatment by diet, medicines, massage and other measures, she returned to her home after an absence of two years. But, in her case, the treatment came perhaps too late; for, although very greatly improved, she never quite got back her old health of mind.

A Simple Method of Pasteurizing Milk.—The simple method of pasteurizing milk is given in the Bulletin of the Chicago School of Sanitary Instruction, November 9th, 1907: "A quart bottle of milk, with the stopper in it, is set upon a saucer in a two-quart granite boiler. The boiler is filled with cold water up to within an inch or two of the top of the milk bottle. It is then placed over the fire and allowed to remain until the water around the bottle begins to boil. It is then at once taken off the

fire and set aside to cool. The water must not be allowed to boil for any length of time, and the milk must be cooled in the water, the entire process taking about forty or forty-five minutes." It is further stated that this process of pasteurization destroys pathogenic bacteria, such as typhoid bacilli. Pasteurized milk, kept in the ice-box, will remain sweet for over a week. If attention is paid to the directions given, very little, if any, cooked taste will be noticed in drinking pasteurized milk, while its nutritive and digestible qualities are not impaired.

The Responsibility for a Consultant's Fee.—The responsibilty for a consultant's fee may involve the issue whether the patient is properly liable for the fee or the patient's family physician. Usually the family physician, when bringing in a consultant, acts as the agent of the patient, and the patient is bound by such action. A case of this kind is reported in *The British Medical Journal,* October 19, 1907: "At the Stafford County Court last week, Dr. Charles Reid sued a master carpenter for a fee of £3 3s. for a consultation in respect to defendant's wife. The point at issue was whether the defendant was properly liable for the fee or the defendant's family physician, Dr. Bull. In 1904 the defendant's wife was taken ill, and Dr. Bull pronounced the case to be one of scarlet fever and forbade the husband to go to work. The defendant, however, persisted that his wife was suffering only from measles. Defendant alleged that Dr. Bull asked him if he had any objection to another opinion, and defendant said he had none, but alleged that he said he would not be at any expense in the matter. Eventually Dr. Reid was called in and gave his opinion, subsequently sending in an account for £3 3s. to defendant. Dr. Bull admitted that he had never mentioned the amount of the fee to defendant. The County Court Judge (His Honor Justice Ruegg) in giving a verdict for the plaintiff, commented on the fact that defendant, on receiving Dr. Reid's account, had never repudiated the debt nor had he mentioned the matter to Dr. Bull. It had been held before that the person actually calling in a doctor was responsible for his fee, and in this case the question seemed to be, was the doctor who called in Dr. Reid acting as the agent of the defendant? The decision of the Judge indicates that, in his Honor's opinion, he was the agent of the defendant and that the defendant was bound by such action."

The Hot Wet Pack in the Treatment of Excited Cases of Insanity, and in Mania a Potu.—Excited cases of insanity are controlled by the use of the hot wet pack, with cold applications to the head (see Bulletin of the Ontario Hospitals for the Insane, October, 1907, p. 6). If an excited patient does not go to sleep after being in the pack thirty minutes, the pack is repeated several times daily, provided it is well borne, before resorting to hypnotics. Among the latter drugs preference is given to veronal, sulphonal, or trional; in some cases grain 1-100 hyoscine is given hypodermically. Thirty grains of sulphonal, given in a glass of hot milk, produces a satisfactory hypnotic effect. In mania à potu the patient suffers from the depressing effects of a poison, which acts on the heart and nerves. Consequently, eliminating action through the skin, bowels and kidneys, is indicated, together with the administration of food. Prompt and excellent results follow the therapeutic employment of the hot wet pack, used until profuse sweating occurs. This is a safer method of producing sleep in a case of mania à potu than the administration of hypnotics, especially if the patient exhibit symptoms of cardiac depression. The artificial warmth of the hot pack, stimulating enemata, composed of castor oil and turpentine, and hypodermic injections of strychnine sulphate, gr. 1-30, repeated, or caffein citrate, gr. iii., or digitalis, answer well in this disease.

Ptomaine Poisoning.—Dr. Hodgetts, Deputy-Registrar General informs us that on an average for the last four or five years there have been four deaths a year registered as due to ptomaine poisoning in Ontario. In the vital statistics of Chicago, for 1906, one death is ascribed to ptomaine poisoning. Cases of ptomaine poisoning are occasionally reported in the medical press, being traced to poisoning by decomposed meat or fish. Tainted meats, as mince meat "warmed over," veal pie, carelessly kept chicken salad, badly preserved and canned meats, partially-decayed sausages (botulism), have caused violent symptoms of poisoning. Prolonged cooking fails to destroy the toxic action of certain ptomaines in infected meats; also cooked meat kept under certain conditions may become infected with bacteria, as well as when it is raw. On the other hand, bad, putrid meat has been known not to cause toxic symptoms. Fish poisoning has been produced by eating both the fresh and preserved sturgeon and salmon-meat that are affected with an infectious disease peculiar to the fish. Tainted, preserved and canned fish, eels, oysters, mussels, crabs, lobsters,

have more frequently caused symptoms of poisoning. In some cases there is a choleraic or gastro-intestinal group of symptoms—nausea, vomiting, pain, tenesmus with mucous, and bloody stools. Erythema or urticaria with heat itching and swelling of the skin have been observed. Sometimes cerebro-spinal symptoms predominate with convulsions and paralysis. Dryness and constriction of the throat, dizziness, labored respiration, disturbed vision, jerky speech, or aphonia, perhaps rapid pulse, loss of coordination, numbness, coldness of the extremities, dilated pupils, paresis, collapse, and death within a few hours may ensue. Dr. Von Neusser (Disorders of Respiration and Circulation, p. 165) draws a comparison between botulism, that is, poisoning by decomposed sausages and albuminous food (both meat and vegetable preserves), and, the symptom-complex of atropin poisoning, in so far as the intoxication with the toxin of botulism, but not when there is an infection with the bacterium coli and bacillus enteriditis, Gaertner's bacillus. He says: "Among the symptoms are dyspnea, with precordial anxiety, annoying and often spasmodic cough, dysphagia, glossoplegia, dryness of the mouth, paresis of accomodation, paralysis of the ocular muscles, ptosis with cardiac weakness, cold, pale skin, and lividity of the mucous membranes. These bulbar symptoms result from the combination of the toxin of botulism with the ganglionic cells of the bulbar nuclei." He says that "intoxications from eating poisonous fish (unsalted sturgeon), also belong to this group. These fish contain a ptomaine with an action similar to atropin, which is destroyed by boiling, and is thus different from the poison by the Japanese tetrodon, which is not destroyed by heat. The symptoms after the ingestion of the various species, sphyrena (including the barracudas), coryphen (dolphin), and scomber (including the common mackerel), are a red or violet complexion, often considerable edema, especially of the lips and eyelids, difficulty in breathing of an asthmatic nature, occasionally acute coryza with sneezing, lachrymation and spastic cough, and resemble closely urticaria of the skin and mucous membranes, after partaking of strawberries, lobster, etc." In making the diagnosis between ptomaine poisoning and arsenic poisoning, Harrington states that there are three points of difference—in arsenic poisoning there is swallowing because of pain; in ptomaine poisoning the pupils are usually dilated, and the muscular prostration is almost as extreme as in palsy. J. J. C.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

To the Managing Editor, Canadian Journal of Medicine and Surgery.—

Dear Sir,—Before going to New York last month you asked me to read over the proofs of an Editorial, referring to my own life-work, intended for the December number of your excellent journal, as you said you were anxious to have it free from errors. I did as you desired me to do, and carefully went over the proofs twice, as you had directed the printers to send them to me, with the MSS. When the December number came out, I found in the second line of the second paragraph of the Editorial that some one, without your authority, for you were in New York, had made a change, which makes the clause incorrect. The MSS. and the proofs sent back to the printers by me, *fully corrected*, were not changed at all in the line referred to, and read, "And his having *founded* one of the best medical colleges," etc. This, which is correct, has been made to read, "*having co-operated in founding.*"

The paper, and the only paper which first suggested the establishment of the Trinity Medical Faculty, was written by me very early in 1871. In writing it, I received no suggestion from anyone, and no medical man ever knew of it until it was approved of. I have the original paper still, and the party who made the above change, can see it any time he chooses to call on me for the purpose. My memorandum of 1871 suggested a basis on which alone a successful medical faculty might be set agoing, and on this basis it was established—so that to say that I had "co-operated in founding" the medical faculty is entirely incorrect. As the person who first suggested it, I was its founder, as all Canada fully knows.

WALTER B. GEIKIE.

December, 1907.

News of the Month.

A STEP IN ADVANCE BY CORNELL UNIVERSITY MEDICAL COLLEGE.

The Faculty of the Cornell University Medical College after mature deliberation have concluded that the usual "high school" education so commonly accepted as sufficient preparation for the study of medicine is inadequate. The great advances in recent years in all the natural sciences have led to corresponding advances in the practice of medicine and surgery, and this has overburdened the medical curriculum as now in operation for the average student to such an extent that the present four-year course in medicine is impossible. Too large a proportion of the time is given up to fundamental and non-professional instruction in chemistry, physics, biology and other kindred subjects, upon which the knowledge of diseased conditions is founded, and too small a proportion to the specialized information which is imperative in the education of a properly equipped physician. The period of four years is deemed sufficient at present if devoted entirely to strictly medical subjects; otherwise, it is not. Without attempting to enter into a discussion involving the advantages of a strictly scientific or so-called academic course in arts, philosophy and literature, the President and Trustees of Cornell University have decided to adopt the requirements advised by the Faculty of the Medical College for admission to the course leading to the degree of M.D.

Therefore in and after 1908, candidates for admission to the Cornell University Medical College must be:

1. Graduates of approved colleges or scientific schools; or,

2. Seniors in good standing in Cornell University, or in any other approved college or scientific school whose faculty will permit them to substitute the first year of a professional course for the fourth year in arts and science, and who will confer upon them the bachelor's degree upon the satisfactory completion of the first year of the course in Cornell University Medical College; or,

3. Persons who, while not possessing a bachelor's degree, give evidence by examination that they have acquired an equivalent education and a training sufficient to enable them to profit by the instruction offered in the Medical College.

In and after 1909 all candidates for admission to the Cornell University Medical College must have at least such knowledge of physics and inorganic chemistry as may be obtained in college by a year's course in these subjects when accompanied by labora-

tory work; and in and after 1910 all candidates for admission must possess a similar knowledge of biology.

Although all "approved colleges or scientific schools" offer courses in the natural sciences, they are not always obligatory, and it was felt to be unfair to a few possible students to demand these subjects the first year the new requirements are in operation.

The Trustees also felt that it was unfair to refuse the exceptional student of unusual abilities who could obtain independently an education equivalent to that implied by a degree from a college or scientific school, and there will, therefore, be a committee appointed from the faculties of the different colleges in the University to determine the qualifications of such individuals who may apply for admission but without the requisite official certificates.

ALEXANDER MACTIER PIRRIE, A MARTYR TO SCIENCE.

A CAREER of great promise has been cut short by the untimely death of Mr. A. Mactier Pirrie.

The son of the late Mr. Alexander Pirrie, C.E., he was born on Oct. 2nd, 1882. He obtained his B.Sc. with honors in anthropology at Edinburgh University, in 1904, and qualified as M.B., Ch.B., in 1906. He obtained the Carnegie Research Fellowship in anthropology and was appointed anthropologist to the Wellcome Research Laboratories, at the Gordon Memorial College, Khartoum. He went out to the Soudan in the autumn of 1906.

Under the direction of Dr. Andrew Balfour, the Director of the Laboratories, Dr. Pirrie made his first expedition up the Nile to the Southern limits of the Soudan, and penetrated to remote parts of the Bahr-el-Chazal. His second expedition took him to the borders of Abyssinia. On both occasions he passed through some of the most pestilential regions of Africa, in connection with certain anthropological and physiological researches, appertaining to tropical diseases, upon which the Laboratories are engaged.

Unfortunately, he contracted tropical fever (kala-azar) and was so prostrated as to be compelled to return to England, leaving Khartoum on June 17th, last.

He rallied from the effects of the fever from time to time, but was compelled to enter Chalmers' Hospital, Edinburgh, in October. His death took place on Nov. 12th.

He was interred at the Dean Cemetery, Edinburgh, on Nov. 15th. The Gordon Memorial College, Khartoum, Sir William Turner, Principal and Vice-Chancellor of the University, Mr. Wellcome and others were represented, and sent wreaths. A resolution of sympathy has been conveyed to the relatives from

the trustees of the Gordon Memorial College, and other expressions of sympathy have been received from the Liverpool School of Tropical Medicine, etc., etc.

It is of interest to note that the first case of kala-azar found in Africa, except a case in Tunis, referred to by Laveran, was reported by Dr. Sheffield Neave, pathologist to the Wellcome Research Laboratories, Khartoum. Dr. Neave found the Leishman-Donovan body, the parasite of kala-azar, in the splenic blood of a patient in the Omdurman Civil Hospital. The discovery is noted by the Director in the Second Report of the Laboratories.

Dr. Pirrie presented a paper on his African expeditions at the last meeting of the British Association for the Advancement of Science, but was prevented from being present on account of his illness. He brought back a most valuable collection of objects of scientific interest.

At intervals during his illness he was engaged on his report to the Carnegie Institute and the Wellcome Research Laboratories, Khartoum, for which institutions he acted jointly in the important work he carried out in the Soudan.

DEATH OF THE OLDEST PHYSICIAN IN CANADA.

Dr. William Bayard, the oldest practising physician in the world, died on December 17th at his home in St. John, N.B., aged 94. Last August Dr. Bayard celebrated the seventieth anniversary of his entry into the medical profession. On that occasion Edinburgh University, of which he was the senior graduate, sent cordial greetings, and the Maritime Medical Association presented him with an address.

For 67 years Dr. Bayard has practised in St. John, of which he has always been one of the most prominent and highly honored citizens. The General Hospital, which he founded, is his chief monument. He was formerly President of the Canadian Medical Association.

Deer Park Sanatarium Not in Any Way Connected With Dr. Meyers' Private Hospital on Heath St., Deer Park.—As there seems to be an impression in some quarters that Deer Park Sanatarium, Yonge Street North, and which recently failed, is connected with Dr. Meyers' Private Hospital, on Heath St., the profession should bear in mind that such is not, and never has been, the case. Dr. D. C. Meyers is well known to the profession as a neurologist, and has conducted for a number of years an institution of his own second to none in the Dominion, devoted to the treatment of nervous diseases.

The Physician's Library.

BOOK REVIEWS.

The Internal Secretions and the Principles of Medicine. By Chas. E. Dette Sajous, M.D., Fellow of the College of Physicians of Philadelphia; Member of the American Philosophical Society, the Academy of Natural Sciences of Philadelphia, etc.; Knight of the Legion of Honor and Officer of the Academy of France; Knight of the Order of Leopold of Belgium, etc.; formerly Lectures on Laryngology in Jefferson Medical College, and Professor of Laryngology and Dean of the Faculty in the Medico-Chirurgical College; formerly Professor of Anatomy and Physiology in the Wagner Institute of Science. Volume Second, with twenty-five illustrations. Philadelphia: F. A. Davis Co., Publishers. 1907.

It is safe to say that perhaps no more important book has been published in years than this, the second, volume of Dr. Sajous' work on "Internal Secretions." One has but to read a chapter or two to see that Dr. Sajous is now giving to the profession, and through it to the world, the result of untiring work in the laboratory on his own part and that of his collaborateurs as to the action of drugs on the various organs of the body. We trust the author will pardon us for quoting a paragraph from his introduction, and which we feel expresses in the best possible manner the object he had in presenting to the profession his work on "Internal Secretions": "Skoda's dictum of several years' standing, 'that we can diagnose disease, describe it and get a grasp of it, but we dare not expect by any means to cure it,' has drifted along on the ripples of time, until in the year of our Lord 1907, the President of a prominent British society, Dr. A. H. Brampton, found it opportune to declare that, 'if any daring member has introduced a subject bearing on medical treatment, it has been with an apologetic air and humble mien, well knowing that if his remarks had any reference to the utility of drugs in the treatment of disease they would be subjected to good-humored banter and received by those sitting in the seat of the scornful with amused incredulity.' My aim now, as it was when 'Internal Secretions' was first projected, is to indicate what, to me at least, appears to be the main cause of the deplorable state of practical medicine of our day, and, if possible, to eliminate it." The author accounts for this "deplorable state" in part by the primary inability of

physiologists " to discern the nature of the function " which has been become disorganized and diseased. That up till the present there has been too much inclination on the part of physicians to guess at what they thought was the true condition of the affected organ cannot be gainsaid. Far too little is really known and understood regarding the functions of respiration and nutrition, yet how much depends upon the former in the successful treatment of pneumonia and tuberculosis. Until far more is understood regarding the problem of nutrition, what, for instance, can we expect to accomplish in the treatment of many gastro-intestinal disorders, such as infantile diarrhea, typhoid fever, etc.? Again, Dr. Sajous calls attention to the ignorance as to how the function of any organ is carried on. The author is careful not to appear over-harsh or ultra-critical in proving the all too many shortcomings of physiology, no criticism being made without careful and searching inquiry beforehand. He thinks that this is due to scientists having overlooked the functions of such bodies as the adrenals, the thyroid, the pituitary body and the leucocytes. It would take more space than is at our disposal to review, as we would like, this splendid work. Its value cannot be estimated in dollars and cents. It is a gift to the scientific world of no less importance than the discovery of one—Jenner. By all means, order a copy of " Internal Secretions," if you don't purchase another book this winter.

W. A. Y.

Human Anatomy, including Structure and Development, and Practical Considerations. By Thomas Dwight, M.D., LL.D., Parkman Professor of Anatomy in Harvard University; Carl A. Hamann, M.D., Professor of Anatomy, Western Reserve from dissection, by John C. Neisler, M.D., Professor of Anatomy, University of Toronto; Geo. A. Piersol, M.D., Sc.D., Professor of Anatomy, University of Pennsylvania; J. William White, M.D., Ph.D., LL.D.; John Rhea Barton, Professor of Surgery in the University of Pennsylvania; with 1,734 illustrations, of which 1,522 are original and largely from dissection, by John C. Neisler, M.D., Professor of Anatomy in the Medico-Chirurgical College. Edited by George A. Piersol. Philadelphia and London: J. B. Lippincott Company.

The putting together of the various parts of this large work, the supervising, proof-reading, etc., and all the other work incidental to publishing such a large volume, has been an enormous task. There are nearly 3,000 pages, 1,734 illustrations, of which 1,522 are original and largely from dissections, by John C. Neisler, M.D. Few are able to understand and appreciate what an enormous task this is, and it is infinitely to the author's credit that he should secure his own cuts rather than go to other books

for them. The artistic work of the dissections is of a very high order of merit. B. N. A. synonyms appear in special type, in association with the English-speaking terminology, a very sensible point. An important feature, and one of very great usefulness, is the amount of practical surgery associated with the various anatomical descriptions. This will appeal more particularly to the general practitioner, who has frequently to read up his anatomy, and in this book he not only obtains the anatomical knowledge, but has it applied to the very region he is particularly studying. The book is a splendid one and lacks nothing the student and practitioner requires, and contains all that should be found in a work of this character. P. G. G.

A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eighth Revised Edition. Octavo of 1317 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $5.50 net; half morocco, $7.00 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

Several editions of Dr. Anders' work on The Practice of Medicine have appeared during recent years, the present one (8th edition) being the fourth published since 1900. This work is one of the text-books recommended to students by the Medical Faculty of McGill University, Montreal, a fact which goes to show that it is recognized as a standard authority on that branch of medical science. Several important additions appear in the new work, viz., articles on Aplastic Anemia, Dementia Senilis, Intestinal Auto-intoxication, etc.

The bulk of the book has not been appreciably increased, the present one containing 1317 pages; the 4th edition contains 1297.

To a practitioner of medicine this work will be useful on account of the close study given to the art of diagnosis, and also because of the wealth of information about the dietetic, physiologic and medicinal treatment of disease. Practitioners interested in the study of the animal parasitic diseases will find the articles on Ankylostomiasis, Dracontiasis, and Trypanomiasis very full.

J. J. C.

Satan Sanderson. By Hallie Erminie Rives. Toronto: McLeod & Allen. Cloth. Illustrated.

In the larger cities the theatres seem to be staging thrilling plays, something to be watched with absorbing, breathless interest, and just enough mystery to keep the interest until the end. Of this type is the story of Satan Sanderson. It is well written, and

the part that tells of the hero's stay in a mining town, and one scene in his early life as a clergyman, in which a game of cards is played on the holy altar table, is unusual enough to make it in very truth interesting reading. W. A. Y.

Ulceration of the Cornea. By Angus MacNab, B.A., M.B., Chief Clinical Assistant Royal London Ophthalmic Hospital. London: Bailliére, Tindall and Cox. Toronto: J. A. Carveth & Co., Ltd. 1907. $1.50.

Mr. MacNab has furnished a very interesting and instructive little book, one for which the increase in our knowledge of the bacteriological origin of corneal ulceration is responsible. The treatment of corneal ulceration certainly cannot be rational without definite knowledge as to its bacteriology, yet practically it is always undertaken, or at least begun, without that knowledge. Much of the classification or nomenclature of corneal ulcers has been very unsatisfactory and obscure. The application of bacteriology to the question will do much to clear up the question, and in many cases will lead to great advance in the practical methods of dealing with the disease condition itself. M.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M.D., and R. H. M. Landis, M.D. September 1, 1907. Philadelphia and New York: Lea Brothers and Company. Six dollars per annum.

The contents of this number comprise diseases of the thorax and its viscera, dermatology and syphilis, obstetrics, and diseases of the nervous system. The opening chapter contains a review of the report of the Royal Commission on Human and Animal Tuberculosis. The Commissioners conclude that there can be no doubt but that in a certain number of cases the disease is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis, and there also can be no doubt that in the majority at least of these cases the bacillus is introduced by cow's milk.

Other interesting topics relate to asthma, hay fever, the pericardium, the heart and the arteries.

Cancer of the skin is discussed in the section on dermatology. It is stated that carcinomatous degeneration can be and frequently is prevented by the proper early treatment of other lesions. The X-ray treatment, though an effective therapeutic agent in some cases, is by many considered to be distinctly dangerous. Considerable attention is also given to syphilis, and the opinions of many authorities are quoted regarding the interesting, yet difficult, problems relating to this disease.

Edward P. Davis, M.D., in the chapter on obstetrics, reviews many live topics relating to pregnancy. He says the symptoms of early pregnancy are unreliable and often misleading. The toxemia of pregnancy is treated extensively. Of special importance are those patients who may be recognized as being in the pre-eclamptic condition. This phase of the toxemia of pregnancy is most important because these patients are amenable to treatment, and eclampsia may often be prevented. Placenta previa also received a fair share of attention. The writer prefers the use of elastic bags to the ordinary tampon in the treatment of placenta previa. Some of the other topics are septic infection and abortion, the cause of labor, and some causes of delayed labor.

The last chapter, devoted to diseases of the nervous system, opens with an ample discussion of brain tremor. This is followed by cerebral hemorrhage, hemiplegia tabes, paresis, poliomyelitis, meningitis, epilepsy, and many other important subjects.

The whole number is full of interest, and will be read with pleasure by the many contributors to this valuable journal.

A. E.

The Medical Record Visiting List or Physician's Diary for 1908. New Revised Edition. New York: Wm. Wood & Co., Medical Publishers.

This year's "Medical Record Visiting List" is largely similar to that of 1907, with the exception of a few changes in the matter composing the preface. The list of remedies showing the maximum dosage in both apothecaries and decimal systems, and the indication of such as are official in the United States will prove exceedingly useful, as also the Obstetric Calendar and the Poisons and Antidotes section.

Clinical Treatises and the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Prof. Edmund Von Neusser, M.D., Professor of the Second Medical Clinic, Vienna; Associate Editor Nothnagel's Practice of Medicine. Authorized English translation by Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College, Attending Physician to St. Peter's and Child's Hospital, and Albany Hospital for Incurables. Part I. Dyspnea and Cyanosis. New York: E. B. Treat Company. 1907.

This work is one of a series of monographs on the disorders of respiration and circulation. It is clinical in character, and is worthy of study by persons who wish to understand the often hidden causes which produce these symptoms:—lesions of the respiratory, or circulatory, or vascular organs,—neurosis of the heart, gastro-intestinal disorders, diseases due to poisons or drugs,

and general diseases. There is a useful chapter on the therapy of dyspnea. The translation has been well done. J. J. C.

Pharmacology and Therapeutics. By Reynold Webb Wilcox, M.A., M.D., LL.D., Professor of Medicine at the New York Post-graduate Medical School and Hospital, Consulting Physician to the Nassau Hospital, Visiting Physician to St. Mark's Hospital, ex-President of the American Therapeutic Society, Fellow of the American Academy of Medicine, Member of the American Medical Association, Vice-Chairman of the Revision Committee of the United States Pharmacopeia, etc. Seventh Edition, revised, with index of Symptoms and Diseases. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut Street. 1907.

This is undoubtedly one of the very best works on Pharmacology and Therapeutics published. The great experience of the author has enabled him to keep abreast of the times in the revision of this book. An effort has been made to present the latest views of the highest authorities in these departments and to render the book as practically useful as possible by full details regarding treatment, thus producing a most complete presentation in logical order of the whole subject of Materia Medica and Therapeutics. A. J. H.

The Reduction of Cancer. By The Hon. Rollo Russell. Published by Longmans, Green & Co., London, New York, Bombay, and Calcutta. Price, 1s. 6d.

"A little knowledge is a dangerous thing," and yet if the Honorable Rollo Russell had not written "The Reduction of Cancer" we would not have had the entertainment of reading this screechingly ludicrous publication.

To eradicate disease in India he would have the natives adopt civilized methods, while to eradicate it in England he would have the Britisher adopt the uncivilized life of the Indian native. A most beautiful rule, for it works both ways. The tone sounds wonderfully like that that howls against vaccination and vivisection, but the writer appears to be merely a humble vegetarian, with an especial antipathy to the unfortunate pig. He says, "We daintily polish the outside dish and recklessly swallow the filth of beasts." He attributes the common cause of cancer to certain articles of diet: "these are in the main, tea, coffee, some kinds of beer, animal flesh and apparently several stimulants and narcotics, including tobacco."

In another clause he tells us that "human cancer is often started by the depressing, toxicating effect of worry. So in animals toxication must often be caused by the fearful distress, wor-

ries and prolonged agonies undergone by cattle in transport before slaughter." Wonderfully sudden development, when it can arise between the cattle car and the slaughter-house! Oh, you funny man, please write some more; it reads like a story-book of an hysterical writer!

He tells us that "In Canada, where the amount of flesh, tea, and coffee is more moderate, the rate is lower than in Australia." We cannot help but wonder if he ever saw a lumberjack eat. The writer has! Once in a camp with six others he saw 105 pounds of beef vanish in three days, and the writer was responsible for not more than ½ pound a day. If he could only see our farm laborer or lumberjack put away beef, pork and the like, as well as the good (?) old boiled tea, he would not attribute our freedom from cancer to our abstinence from tea and meat.

It is only too true that much may be said in favor of the simple life, but we fear that the author, if he is not careful, may contract cancer from the toxication resulting from the immoderate use of the pen. S.

The Practical Medicine Series. The Eye, Ear, Nose and Throat. Edited by Casey A. Wood, M.D.; A. H. Andrews, M.D.; G. P. Head, M.D. Series 1907.

No matter how extensively the practitioner may read, every year brings forth advances and new ideas in medicine which are sure to escape his notice. To keep track of and keep pace with these advances, one must have some such work as this. This series, published in ten volumes, has the advantage of being published in a handy, compact size, for one is often daunted by the size and bulk of the ordinary annual. M.

Some Points in the Surgery of the Brain and Its Membranes. By Charles A. Ballance, M.V.O., M.S., F.R.C.S., Surgeon to St. Thomas' Hospital and to the National Hospital for the Paralyzed and Epileptic, Queen's Square, etc.; with illustrations. London: Macmillan & Co., Limited. New York: The Macmillan Co. 1907.

This volume of 396 pages is profusely illustrated. It is an able presentation of a complex and difficult subject. The author has distinguished himself in the particular field of work with which the book deals and this most recent contribution to the literature of Brain Surgery is one of great value. The material presented in the volume was prepared for the Lettsomian Lectures of the Medical Society of London for 1906. A large amount of clinical material is recorded in a manner which will be particularly useful to the student who wishes to investigate the difficult problems of brain surgery.

The surgery of the Cerebral Membranes includes such subjects as Sub-dural Hemorrhage in Infants and Adults, Traumatic Encephalocele, The Pathology of Meningeal Infections, Sub-dural and Sub-arachnoid Suppuration, The Varieties of Meningitis, Tuberculous Meningitis and Hydrocephalus Interna. The articles on Brain Abscess and Brain Tumors are most interesting and instructive. The views of the author are supported by descriptions of clinical and pathological findings, which are arranged and presented in a systematic fashion, so that the theories advanced are shown to be the logical conclusions arrived at from the study of a large amount of material which has been accumulated during an unusually wide experience in brain surgery.

The work will be found particularly helpful as an aid to the diagnosis of the various brain affections which come within the province of the surgeon. The difficult subject of the localization of brain tumors is treated in a masterly manner and this section will be welcomed by those who are confronted with the difficult problems which such cases present in practice. The book will be much appreciated by the profession as an able contribution from a distinguished author. A. P.

Text-Book of Organic Chemistry for Medical Students. By G. v. Bunge, Professor of Physiological Chemistry in the University of Basel. Translated by R. H. Aders Plimmer, D.Sc. (Lond.), Assistant Professor of Chemistry and Fellow of University College (London.) London: Longmans, Green & Co., 39 Paternoster Row. New York, Bombay and Calcutta. 1907.

This work has been written with a view of providing the medical student with a book which he can use as a guide to investigations which have been already elucidated and put in such an order that he can the more easily make progress in this rapidly-developing science. The student will undoubtedly find this of the greatest assistance in the pursuance of his studies on this subject. A. J. H.

Saunders' Revised Catalogue.—So great has been the demand that W. B. Saunders Company, the medical publishers of Philadelphia and London, have found it necessary to issue another revised edition of their illustrated catalogue of medical and surgical books. In looking through the copy we have received, we find that since the issuance of the last edition six months ago, the publishers have placed on the market some twenty-five new books and new editions—truly an indication of publishing activity. The colored insert plate from Keen's new Surgery, which enhanced the

value of the former edition, has been replaced by a new one from the second volume of the same work, and this alone gives the catalogue a real value. A copy will be sent to any physician upon request.

Pelvic Inflammations in the Female, being the Ingleby Lectures delivered at the University, Birmingham, May 9th and 16th, 1907. By THOMAS WILSON, M.D. (Lond.), M.Ch. (Birm.), F.R.C.S. (Eng.), Obstetric Officer to the General Hospital, Birmingham, Physician to In-Patients at the Birmingham Maternity, etc., etc. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1907.

In the Ingleby lectures, the author, Dr. Wilson, Birmingham, treats of pelvic inflammations in the female, largely from the standpoint of his own practical observations.

Parturition and gonorrhea are shown to be the chief causes of the introduction of the pathogenic organisms, from which inflammations in the female pelvic organs arise. The lecturer covers a great deal of ground in these lectures. What he says on the etiology, pathology and treatment of these diseases will commend itself to the judgment of experienced physicians, and should throw a strong light on the pathway of the beginner.

American gynecologists, such as Hirst and Penrose, have given in their published works opinions similar to those expressed in Dr. Wilson's lectures. J. J. C.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. VI. Lumbar Region—Nephrotomy. Edinburgh and London: Wm. Green & Sons.

Volume VI. of this excellent work reached us a few weeks ago, and its perusal has afforded us a great deal of pleasure, as well as instruction. The most extensive article in the volume is that dealing with diseases of the lungs. It covers about seventy pages and makes in itself a good-sized book. It is from the pens of three well-known writers, Drs. R. W. Philip, S. H. Habershon, and R. A. Fleming. It is subdivided into several parts, and deals with tuberculosis, pulmonary fibrosis, pneumokoniosis, gangrene, emphysema, vascular disorders, syphilis, abscess and parasitic affections. This section is most complete, and is alone worth the price of the volume.

Dr. H. J. Stiles devotes almost fifty pages to diseases of the mammary gland. Other subjects discussed at more or less length include papers on disorders of menstruation, mental deficiency, mumps, nephritis, forensic medicine, injuries and diseases of the mouth and jaws, lupus, lunacy, and about thirty other equally interesting topics.

Lateral Curvature of the Spine and Round Shoulders. By Robert E. Lovett, M.D., Boston. Philadelphia: P. Blakiston's Sons & Co. Canadian Agents: Chandler, Ingram & Bell, Toronto.

Lovett's work on lateral curvature is the most scientific and accurate account of this most complex deformity which has appeared in English.

The pathological anatomy is most difficult, but it has been well elucidated by the author and the reader is greatly aided by the numerous drawings and radiographs.

The chapter on Etiology will convince one that the causes are very numerous and that while many of them are not removable, yet preventive treatment should play an important part and that the family physician can be of most service in this domain.

Curvatures have a very natural and proper classification as being "postural" or "structural." The treatment for the first variety is found in substituting a correct attitude for a faulty one; first, by removing causes and afterward by persistently performing certain gymnastic exercises. In the second variety force must be employed in some way so as to render the spine supple before gymnastics can be of much service.

The author's teaching may be summed up by saying that he advocates machine pressure for forcibly correcting or lessening the resistent curve, the maintenance of the improved attitude by plaster-of-Paris fixation dressings, and afterward employing gymnastics.

Those who wish to have at hand the best authority in English upon this subject should procure Lovett's work on Scoliosis.

B. E. M.

The Development of the Human Body. By J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy, University of Toronto. Third Edition, with 257 illustrations. Price, $3.00. Philadelphia: P. Blakiston, Sons and Company, Publishers.

To intelligently understand the functions of the various organs of the human body, a study of their development is essential, or to fully comprehend the cause and development of certain cysts and other pathological conditions a knowledge of their embryology is most important. Perhaps ovaries now sacrificed by would-be surgeons might be saved if they but knew the normal appearance of a corpus luteum undergoing retrogression. It would be well, too, for the general practitioner to make a more careful study of his centres of ossification and general bone development in order that he might gain a more comprehensive idea of the growth of bone, and from it learn to treat his fractures with a greater scien-

tific knowledge. To practitioners, therefore, we heartily recommend McMurrich's Study of Embryology, and to students studying medicine it will prove a valuable text-book. S.

Kirke's Handbook of Physiology. Revised and Rewritten. By Charles Wilson Greene, A.M., Ph.D., Professor of Physiology and Pharmacology, University of Missouri. Sixth American Revision, with five hundred and seven illustrations, including many in colors. New York: William Wood and Company. 1907.

In this edition the amount of space formerly devoted to anatomy has been greatly reduced, while that occupied with subjects which deal purely with physiology has been increased. The text has been largely rewritten and improved in many ways. At the end of the chapters there has been introduced full and clear directions for practical laboratory work, which will be very helpful to students who are doing work in practical physiology. Many new illustrations of physiological experiments have also been introduced, and these simplify the text and make it easily understood. This is a handy and useful work on physiology for students and practitioners. A. E.

Primary Nursing Technique, for First-year Pupil Nurses. By Isabel McIsaac, graduate of the Illinois Training School for Nurses, formerly Superintendent of the Illinois Training School for Nurses, Honorary Member of the British Matrons' Council, Charter Member of the Nurses Associated Alumnae of the United States, etc., etc. New York: The Macmillan Co. Toronto: The Macmillan Co. of Canada, Limited, 27 Richmond Street W. 1907.

This is a thoroughly honest book for nurses starting on their course of study. It is evidently written with the one object in view, viz., to inculcate in the minds of its readers the fact that an accurate knowledge of the human body is the first essential to successful nursing. The authoress also urges thoroughness and patience as the *sine qua non* of the nurse. The book is clear in diction and should find a large sale.

The Weavers. By Sir Gilbert Parker. Toronto: The Copp, Clark Company, Limited.

All Canadians, perhaps, regret that Gilbert Parker has forsaken his first love and apparently ceased to write the tales of life in "Lower Canada." Those early stories were so charming and had for many readers a fascination all their own.

His new story, "The Weavers," lacks the old, forceful simplicity; it is too ornate and fairly revels in melodrama. Egypt,

its life of intrigue, ceremony and servility, crime, war, and over all, a strange love and a "Quaker" lover, perhaps a century plant in the book garden of heroes, for his like has not bloomed in a hundred years. W. A. Y.

A Manual of the Practice of Medicine. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Eighth Edition Revised. 12mo of 558 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Flexible leather, $2.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

Dr. Stevens' Manual of the Practice of Medicine is, as the author says, intended especially for the use of students. No doubt students, particularly when preparing for examination, will find it very useful. It is a convenient work for the practitioner as well. A number of good formulæ appear in the different articles.

Diseases of the skin and its appendages are included. The style is laconic but lucid; a very meritorious work J. J. C.

Manual of Physiological Chemistry. By Elias H. Bartley, B.S., M.D., Professor of Chemistry, Toxicology, and Pediatrics in the Long Island College Hospital. Third edition, revised and enlarged, with 51 illustrations. Philadelphia: P. Blakiston, Sons & Co., 1012 Walnut St. 1907. $1.00 net.

This edition has been thoroughly revised by the author. Some of its chapters have been entirely rewritten and much new matter has been added, notably in those parts which deal with the examination of blood and feces.

A considerable number of new illustrations and methods have also been added, together with explanatory notes which describe the clinical significance of results obtained in the laboratory.

This is a handy little volume of two hundred pages, and it will be appreciated by students in clinical chemistry.

A Text-Book of Ophthalmic Operations. By Harold Grimsdale, M.B., F.R.C.S., Ophthalmic Surgeon to St. George's Hospital; Surgeon to Royal Westminster Ophthalmic Hospital; and Elmore Brewerton, F.R.C.S., Surgeon to Royal Westminster Hospital. London: Hegan, Paul, Trench, Trübner & Co. 1907.

Treatises in English on ophthalmic operations are few and far between. Czermal's encyclopedic work will always be the resort of those who read German, or Terrien of those who read French. Grimsdale's book is hardly of the same order as these, being, as one expects to find in an English work, much shorter.

If we remember aright, Mr. Grimsdale paved the way to this work by a smaller work on ophthalmic operations as performed on dogs and on the cadaver.

All the usual and many of the unusual ophthalmic operations are described, and references are given in a bibliography at the end of each chapter, to the original authorities, a most valuable feature indeed. The illustrations are rather in the diagrammatic order—perhaps the more useful on that very account.

J. M. M.

Anatomy of the Brain and Spinal Cord, with Special Reference to Mechanism and Function; for Students and Practitioners. By Harris E. Santee, M.D., Ph.D., Professor of Anatomy in the College of Physicians and Surgeons, Medical Department, University of Illinois; Professor of Anatomy in Jenner Medical College, Chicago. Fourth Edition, revised and enlarged, with 128 illustrations, 33 of which are printed in colors. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut Street. 453 pages. 1907.

In this work will be found an excellent presentation of our present knowledge of the anatomy of the central nervous system. The subject is dealt with in a fashion which will prove of especial value to the student. The illustrations are unusually good and largely original. The B. N. A. nomenclature is adhered to and this will increase the value of the work, as the coming generation of students will be familiar with no other. We commend the book as a valuable contribution to anatomical literature.

A. P.

A Manual of the Diagnosis and Treatment of the Diseases of the Eye. By Edward Jackson, M.D., Professor of Ophthalmology in the University of Colorado. Second revised edition. 12mo of 615 pages, with 182 text-illustrations and 2 colored plates. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $2.50 net. Toronto: J. A. Carveth.

This second edition of Jackson's "Diseases of the Eye" appears with not very much increase in size, but yet with a good deal of change in matter. One expects from the author of an ophthalmic year-book that his work will above all things be up-to-date. This it is, but Jackson is not carried away by the temporary enthusiasm of ophthalmology; the wheat has been gathered and the chaff cast away. One wonders how so much is got into the book; even such unusual conditions as myasthenia gravis and developmental alexia are treated of.

This text-book has always been such a favorite of mine that I take it for granted that it will be the same with all other readers.

J. M.

A Text-Book of Physiology. By Isaac Ott, A.M., M.D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia; ex-Fellow in Biology, Johns Hopkins University; Consulting Neurologist, Norristown Asylum, Pa.; ex-President of the American Neurological Association, etc. Second edition revised and enlarged. Illustrated with 393 half-tone and other engravings, many in colors. Philadelphia: F. A. Davis Co., publishers. 1907.

A reader of the first edition of Dr. Ott's work on physiology would hardly recognize his book now, so much has he enlarged it. There must be not less than 200 pages more matter in the second edition than in its predecessor. This is necessary in view of the rapid advances made in this study during the past few years. The book includes between 250 and 300 illustrations, the majority of which are original. The writer has had the greatest pleasure in going through this volume, perhaps more especially the chapters devoted to Electro-Physiology and Reproduction. There is every reason to think that Dr. Ott's Text-Book of Physiology will become a recognized authority on the subject.

A Text-Book of Clinical Anatomy. For Students and Practitioners. By Daniel N. Eisendrath, A.B., M.D., Clinical Professor of Anatomy in the Medical Department of the University of Illinois (College of Physicians and Surgeons), Chicago. Second Revised Edition. Octavo of 535 pages, with 153 illustrations, a number in colors. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $5.00 net; half morocco, $6.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

In the teaching of anatomy, as in many other branches of medical education, very considerable advance has been made during the past twenty years or more. Anatomy is taught to-day in a manner not even thought of twenty-three years ago, as can well be remembered by the writer of this review. The developments in surgical practice alone necessitate a far more careful and detailed study of human anatomy than was thought to be essential a quarter of a century back. Nowadays, a study of the fundamental subjects must form the basis of a successful career in medicine, and regional or typographic anatomy takes the place in a students career, of descriptive anatomy, so-called. The study hour after hour in memorizing the brachial plexus, the abdominal circulation, the interior anatomy of the brain, is useless without a resultant ability to apply such knowledge to clinical work. For those reasons, Eisendrath's Text-Book of Clinical Anatomy, in its revised edition, will be found immensely helpful to the student in aiding him so to apply his knowledge that when he reaches

the bedside and the operating room, he will reap the benefit of his work where and when most needed.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert H. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Assistant Professor of Pathology, University and Bellevue Hospital Medical School. Octavo of 536 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $5.00 net; half morocco, $6.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

The authors announce that, in presenting this volume, they have done so "from the standpoint of the general practitioner and surgeon." That fact is borne out by a perusal of the different chapters, and we would recommend authors of books on special subjects to "go and do likewise." The book is first and foremost practical. The different diseased conditions of the uro-genital tract are considered fully, each chapter being yet free from too much detail, the authors having wisely not attempted to make their book complete, but have confined themselves to a consideration of those conditions with which the general practitioner is least familiar. The book, being the product of a physician and surgeon, equal attention is devoted to the medical and surgical aspects of the different diseases.

A Manual of Personal Hygiene. Proper Living upon a Physiologic Basis. By Eminent Specialists. Edited by Walter L. Pyle, M.D., Assistant Surgeon to the Wills Eye Hospital, Philadelphia. Third revised edition. 12mo of 451 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $1.50 net. Canadian agents: J. A. Carveth & Co., Toronto, Ont.

Dr. Pyle is to be congratulated on having produced a work which any medical man may, without the least hesitation, recommend to his patients and lay friends. Unlike most books written on personal hygiene for the general public, this one is thoroughly scientific and up-to-date. We are not surprised at this when we note that each section of the work is written by a well-known specialist in that particular subject, *e.g.,* Dr. Stockton, of Buffalo, writes the chapter on hygiene of digestive system; Dr. G. H. Fox, of New York, on the skin and its appendages; Dr. E. Fletcher Ingals, of Chicago, on the vocal and respiratory apparatus; Dr. A. B. Randall, of Philadelphia, on the ear; Dr. Pyle, of Philadelphia, on the eye; Dr. Coventry, of Boston, on the nervous system; Dr. Stewart, of Chicago, on physical exercise; and Dr. Bergen, of Philadelphia, on domestic hygiene. Each division

of the work is as full as one could desire, and where necessary to illustrate the text good cuts are used.

There is an appendix which treats of the pulse, temperature, respiration, baths, massage, accidents, emergencies and poisoning, with a table of poisons and antidotes. There is a very useful glossary and a good index. W. J. W.

A Treatise on Diseases of the Skin. For the use of advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth Edition, Revised. Handsome octavo of 1150 pages, with 267 text-illustrations, and 34 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $6.00 net; half morocco, $7.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

We think that we have once before alluded to the fact that of dermatology, more than in any other branch of medicine, there is altogether too much lack of knowledge among medical practitioners. This is doubtless due to the fact that up till some years ago practically no special course of lectures on skin diseases was given at our schools of medicine and universities. This fact, we think, must have been recognized by Dr. Stelwagon, in writing the fifth edition of his now well-known Treatise on Diseases of the Skin. He has presented the practical part of his subject in such a manner as to make his book readable to the general practitioner, skin diseases at the best not being the most interesting subject for study. That such is the fact is perhaps the best possible recommendation we can give his book, and should alone ensure a large sale. D. K. S.

Manual of Anatomy. Systematic and Practical, including Embryology. By A. M. Buchanan, M.A., M.D., C.M., F.F.P.S. Glas.; Professor of Anatomy in Anderson's College, Glasgow. Vol. II., Abdomen, Thorax, Head and Neck, Nervous System, Organs of Special Sense, and an Appendix containing the Bole Nomenclature and a Glossary. London: Bailliere, Tindall & Cox. 1907. Canadian agents: J. A. Carveth & Co., Toronto, Ont. Price, $3.25. Two volumes, $6.00.

This handy volume is well written and beautifully illustrated. Each section is divided into topics and all of these are carefully and accurately described.

A guide to the dissection of each part is placed at the end of every section, and this will prove to be a great aid in the study of anatomy. A large number of the illustrations are colored, and the coloring in almost all cases is excellent. This is sure to become a popular text-book with students. A. E.

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Original Contributions.

A CASE OF MYASTHENIA GRAVIS.

BY JAMES MacCALLUM, B.A., M.D.,

Oculist to St. Michael's Hospital, and Victoria Hospital for Sick Children, Toronto.

R. J., aged 57, contractor, was sent to me on June 27th, 1905, by Dr. Mulligan, of Petrolea, to whom he had complained of double vision and weakness of muscles at the back of the neck, left arm and lower jaw. Three weeks before, his left upper eyelid began to droop and the left eye to roll up. Double vision and dizzy attacks followed, and pain in the back of the neck and head. The double vision was worse in the afternoon and evening. Power is lost in the muscles of the neck, so that he can scarcely hold his head up. He says that his arms seem weak when behind him, for he cannot button on his collar at the back, but when his arms are in front of him he has full power. Occasionally he seems to lose power over his lower jaw, so that he cannot chew his food. It tires him out, so that he has to use his hand to move the lower jaw up and down. If he rests a while he can chew again, but soon he must again have the help of his hand. He has had some difficulty in speaking also. When he pushes his jaw forward he feels that he loses power over it and cannot raise it.

To prevent dizziness he keeps the left eye shut; he cannot close the left as tight as the right, nor can he open it as easily against resistance. When he laughs his face draws a little to the left. When the left eye is opened the ball is seen to be higher than the right, and turned in. A prism of 15 degrees base down corrects both the turning up and the convergence. Papillary reactions normal, fundus normal. R. V. 6-9. L. V. 6-9. Examination showed tongue, palate, uvula and larynx to be normal.

His peculiarly motionless, listless, almost mask-like face and his white hair give him an appearance of age beyond his years, not borne out by the condition of his arteries. A year ago he had an epithelioma removed from his lip.

He was engaged in building a fence when he noticed the eye beginning to be affected. This, and the fact that the joints of his hands were stiff, as well as the absence of anything pointing to a central lesion, had caused the diplopia to be considered as due to rheumatic paralysis of the ocular muscles, and treated as such.

An ophthalmoplegia externa, as manifested in the ptosis and diplopia, did not in any way explain the other outstanding symptoms—the peculiar weakness of the muscles of the neck, jaws and arms, then recovery of power after a rest, and their speedy weakening when again set in action—and a tentative diagnosis of myasthenia gravis was made.

He was told to wear a ground glass over the left eye to relieve the dizziness produced by the diplopia.

On July 12th Dr. Mulligan wrote that on the least exertion there was a trembling of the muscles, some thickness of speech at times, and great complaint of his jaw becoming tired when eating, but the wearing of the ground glass had relieved his diplopia.

(As he made no progress toward recovery, he consulted a Chicago neurologist, who diagnosed bulbar paralysis, and told him that he would not recover.)

Toward the end of August he was seen by Dr. Hugh A. McCallum, of London, who writes me: "The muscles of mastication tired out in chewing a piece of meat, so much so that he was unable to move his jaws for a time. They would recover and be as powerful again for a few bites as in the days of his health. his hand-grasp at first was normal, but after grasping for four or five times he lost power in the hand and arm entirely." "Some weeks before I saw him, on attempting to pitch some hay he was suddenly seized with paralysis of the muscles of respiration, and for some few moments it seemed as if his condition would terminate fatally." "Indeed, the muscles of the eye, face, mastication and larynx and many of the voluntary muscles of the limbs were involved. There were marked remissions of the symptoms."

I next saw him on January 11th, 1906, when he had improved greatly, the only symptom persisting being occasional weakness in holding his head up. He told me that after leaving my office on the occasion of his first visit, his knees gave way, and he sank down, so that the myasthenia seems to have attacked the muscles of the extremity. For some time thereafter, he says, he had difficulty in breathing, in swallowing and in talking. After resting he had less trouble in these things, but speedily tired out. He says that after taking one bite he felt played out, and would have

to support his jaw. The weakness of the arms was manifested especially in actions which required them to be raised; *e.g.*, he could not put the bridle on his horse. He had great difficulty in winding the clock, which stood high up on the wall. His ability or inability to do this he used as a test of what progress he was making towards recovery.

On August 28th, 1906, his wife reports that he has no double vision, no weakness of any kind, and is now overlooking some building contracts.

The age of this patient made me doubt whether this might not be a case of bulbar paralysis, but the condition of the tongue, palate and uvula, and the involvement of the arms, negatived that. The non-appearance of atrophy, and, above all, the subsequent history, puts that out of court. The absence of sensory symptoms led me to exclude neuritis.

Although this patient is after a year and a half apparently perfectly recovered, yet it is well not to be too sanguine, for the symptoms have been known to recur after even longer intervals.

The upward rotation of the eye is of interest, especially in view of the statement made by Gowers that a striking difference from the ophthalmoplegia of muscular degeneration is the greater escape in myasthenia of the muscles moving the eyeballs downwards.

Myasthenia cannot be due to any local disease of the nerves. Any organic affection of the governing nerve centres is equally improbable. Moreover, neither gross nor microscopic examination has shown any condition of the nervous or muscular system capable of producing the phenomena of the disease.

The very same phenomena are seen in muscles after undue and prolonged use. We then speak of it as fatigue, and regard it as a normal condition. In myasthenia gravis, however, the phenomena appear after muscular movements not unduly prolonged nor severe.

What is fatigue? What changes take place in the structure of the muscles, or in their intracellular chemistry in fatigue?

Contraction is said to follow on a stimulus carried to the muscle by the nerve, but Langley[1] has shown that even after nerves have been cut, or paralysed by nicotine, the muscle will still contract, so that the nervous impulse does not act directly on the contractile substance of the muscle, but on some accessory substance—called by him the receptive substance of the muscle—which receives the stimuli, and transfers them to the contractile substance.

In all cells two constituents, at least, are to be distinguished: a chief substance which is concerned with the chief function of the cell, as contraction and secretion, and receptive substances

which are acted upon by chemical bodies and in certain cases by nervous stimuli. The receptive substance affects or is capable of affecting the metabolism of the chief substance. The receptive substances are especially liable to change.

Some peripheral tissues are in a constant state of slight activity brought about by nervous stimuli; this causes the tone of striated muscle. Thus there are two factors in producing tone, viz., the intensity of the nervous stimuli, and the responsiveness of the receptive substance.

The receptive substance of cells varies considerably, due to the inherent tendency to variation in the chemical nature of the cells, and may vary in their responsiveness to nervous stimuli. No doubt, also, when a nerve is effective, the frequency with which it is put in action would tend to increase the receptive substance by use. The different degree of tone of the tissues is probably in part due to the responsiveness of the receptive substance.

A cell may make motor or receptive substances, or both, and the effect of a nervous impulse depends upon the proportion of the two kinds of receptive substances which is affected by the impulse.

An increase or decrease of function in a cell brought about by chemical or nerve stimulation depends upon the presence in the cell of different receptive substances. These receptive substances seem to be formed at the myo-neural junction, yet they are not dependent on nerve fibre, for the receptive substance does not degenerate on degeneration of the nerve fibres. It would appear that there must be some chemical change in the muscles causing the early exhaustion of the function of the receptive substance.

It is obvious that in myasthenia the intensity of the nervous impulse is not less, so that it must be that the responsiveness of the receptive substance is at fault. Receptive substances are acted upon by internal secretions.

The quick exhaustion and the quick recovery of the different muscle groups is characteristic of myasthenia. The same thing, but less marked, is seen in multiple sclerosis, polio-encephalitis inferior, polio-myelo-encephalitis, infantile and family bulbar affections (paralyses). In Landry's paralysis there is no temporary recovery of power in the muscles.

The well-marked remissions are also characteristic. Goldflamm and Rogowsky[2] assert that even during these remissions close search will reveal almost always a slight ptosis, palatal, facial or other paresis, showing that the disease is not quite exhausted.

13 Bloor Street West, Toronto.

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ETHICS AND DEPORTMENT OF THE PROFESSIONAL NURSE.*

BY DR. JOHN HUNTER.

THERE is in all animate life an innate feeling or instinct, to which the needs of the sick or disabled make a strong and usually a very effectual appeal. It is unfortunately true that vicious habits or sordid selfishness may so influence this feeling or instinct as to prevent it manifesting itself in any way, but this absence of sympathy is a morbid condition, and, therefore, an exception to a universal law that lays the duty of taking care of the sick upon those who are well. In the primitive stage of our civilization the people were so inured to hardships, the needs of the sick were so simple and so easily provided for, that about all that was required of the nurse or attendant were the kindly and willing hands. The development of a higher civilization, by the diffusion of knowledge, has so increased the comforts and purposes of life that not only have the luxuries of one age become the necessities of the next, but the exigencies of domestic, of social, and of business life make the sick not only impatient to seek relief from suffering, but extremely anxious for speedy restoration to health, in order that they may take their place in life's drama. The hurry, flurry and worry of modern life make the care of the sick a very complex problem. An insatiable thirst for knowledge, spurred on by the imperious demands of modern life, evolved the science and art of medicine, which in turn conceived and gave birth to the professional nurse, the legitimate child of scientific medicine.

Like the new members in many of the primitive tribes, who had to win their place in the ranks not only by deeds that called for great endurance and heroism, but also by swearing allegiance to the tribal laws and regulations, the professional nurse has to win her place through a long and arduous course, involving much study and trying experiences, which often call for as calm and dauntless heroism as many an exploit on the battlefield. As soon as the nurse receives her diploma she becomes a member of the order known as professional nurses, and, therefore, subject to the laws and regulations governing this order, or, in other words, to the code of ethics and deportment of the professional nurse.

ETHICS.

The ethics of the professional nurse may be defined as the principles governing her life as an individual, and also as the laws and regulations governing the complex relationship her work bears to her patient, to the physician, and to her calling. As each nation

* Address given to the Nurses of the Western Hospital.

has its own language by which to express its thoughts, emotions and needs, so each calling has its own code of ethics governing the actions of its members.

Let us briefly consider the relationships referred to above in the order of their importance. The first is that of the nurse to her patient. This relationship on the part of both nurse and patient, but especially on the part of the former, demands a consistent and persistent exhibition of all the characteristics of the so-called Christian graces. Truthfulness is imperative, untruthfulness is absolutely criminal. No matter what mistakes she may have made, or what directions she has failed to carry out, the nurse is bound by the ethics of her calling to be frankly truthful in regard to all she has done or left undone. Mistakes, when promptly confessed, can be forgiven, but a deliberate lie calls for one act only, and that is prompt dismissal with all the disgrace that goes with it.

Gentleness implies the absence of all that is unfeeling or boorish. Its presence in the nurse is manifested in facial expression, in speech and in touch. It does not include weakness or vacillation. The nurse who fails to discharge her duties faithfully and efficiently, lest she finds herself antagonized by the whims of patients, or relatives, or lest she inflicts some pain rendered unavoidable by needed change of the dressing of a wound, or of the position of the body, may be the most cruel of attendants. Gentleness on the part of a nurse involves the faithful discharge of her duties with good-natured inflexibility, the more so when the cry of voices is against her. She must learn to—

> "Welcome the rebuffs
> That turn earth's smoothness rough."

Purity must be absolute in thought, word and act. Words and actions which, in the drawing-room might pass uncriticized, or, perhaps, be considered only silly, become utterly improper in the sick-room. It is more than annoying to the physician or relatives of the sick one—when he is the father, or, more especially, when she is the mother—to have him, or her, as the case may be, complain of the conduct of the nurse when the son or some other male relative was in the room. The ethics of nursing sternly forbid any conduct on the part of the nurse that may give rise to parental suspicion or anxiety. The crime is increased a hundred-fold when the conduct of the nurse creates any suspicion of improper familiarity between her and the husband. If the nurse should, perchance, become the second wife, her conduct as the nurse should have been such as to render any such statement as *e.g.*, "Just what we expected when we saw what was going on between them when the first wife was on her death-bed," impossible or utterly incredible.

Honesty on the part of the nurse is not confined to material

things only, but includes faithful and efficient service. The very fact that you class yourselves as professional nurses implies the possession of the requisite amount of scientific knowledge and training. You have the opportunity of acquiring both of these during your hospital course, but if from any cause you fail to obtain them your ignorance and inability will make it impossible for you to render an honest service. Again, you may have these qualifications, but on account of indolence, of carelessness or of distractions from other sources, you may not give honest service. These subtle temptations are far harder to resist than any of the grosser ones of common dishonesty.

The ethical relationship between nurse and physician claims all the virtues already specified, with the addition of unfaltering loyalty. While you are nursing his patient he, and he alone, is the physician for that patient. Whatever your private opinion may be as to the greater ability of some other physician, your duty is to be loyal to the one in attendance on the case. If you see plainly that something is being overlooked, or left undone, that the physician's attention should be called to, seek a private interview and give the information. It is your duty to help keep up the patient's confidence in the physician, and to dispel, if possible, any doubts as to his ability to treat the case properly. I need not detain you as to the manner of keeping your medical chart, care of the instruments, etc., etc.

The ethical relationship of the nurse to her calling demands the possession on the part of every professional nurse of a broad, mutual faith—not only faith in one another—but faith in all the others. Every calling is judged by the character of its members, by the confidence these place in each other, and by the enthusiasm they put into their work. The duty of maintaining the honor of her calling has just as imperative a claim on the professional nurse as the earning of a livelihood or making provision for the future.

Deportment.

Assuming that you have acquired the knowledge and skill essential to your calling, and that you possess the character and virtues already discussed, then comes up the problem of how to use all these to the best advantage. The innate instinct or desire to appear attractive should be carefully cultivated by the professional nurse. The conventional uniform and dress should be faultlessly clean and neatly made. The strictest attention should be paid to personal hygiene. The daily bath, wholesome food, sufficient sleep, together with abundance of fresh air and sunshine are essential. Every effort should be made to bring into the sick-room the bright eyes, ruddy cheeks, inoffensive breath, and the graceful, firm poise of body that comes with good health. The nurse should cultivate a musical voice, and she should endeavor to be able to express herself

in good language. Slang should be religiously avoided in the conversation of the sick-room.

Tidiness is very essential in nursing. It must be very disagreeable for the patient, and it is certainly very unpleasant for the physician, or visitor, to find the sick-room a medley of drug store, nursery, and laundry. A place for everything and everything in its place, may be an old precept, but it is a valuable one for the nurse to keep in mind. Again, the nurse cannot be too careful about the disposal of soiled clothing. The bath-room, which is used by the other members of the family, is not a proper place for such articles, especially those removed from the obstetric room. That the bath-room has been made use of is very mortifying to the mothers, when told of it, and it is certainly very unwelcome news to the physician.

Great care and tact must be exercised in the preparation of the patient's food. Sickness puts a very severe strain on the resources of the family, so if the nurse leaves the preparation of many special dishes for others, who feel that they are already overtaxed, or if she obtrude herself into their busy hours, disorder and discord are very likely to follow.

What has been said already in regard to deportment, refers more particularly to nursing during the more or less acute stages of illness, but it is during convalescence that the personality, and resourcefulness of the nurse are given the severest test. When the patient is very ill, the duties of the nurse are largely confined to caring for the physical needs, and therefore are of a somewhat routine character. During convalescence, the psychic or mental perturbations have to be dealt with, and these are very variable, both in intensity and in form. The day is past for setting these psychic disturbances down as mere whims of the patient, for psychology teaches us that there are certain laws governing our mental acts. High literary and musical attainments are of inestimable value to the nurse in dealing with many of the psychological conditions to be met with during convalescence. David assuaged the madness of Saul by playing on his harp. Painting, fancy work, nature study, and games, may enable the nurse to furnish her patient with many helpful and pleasant pastimes.

The time has certainly come, when every hospital staff should provide the nurse with a short practical course on the psychology of the sick room.

My hour is up, and I have only to say in conclusion, that the real value of a short address like this, does not consist so much in what has been said as it does on the thoughts it suggests to the minds of the intelligent listeners. If anything I have said to-night has set you to think for yourselves, the full purport of the address has been realized.

LEUKOPLAKIA LINGUÆ.*

BY JOHN V. SHOEMAKER, M.D., LL.D.,

Professor of Materia Medica, Therapeutics, Clinical Medicine, and Diseases of the Skin in the Medico-Chirurgical College and Hospital, Philadelphia.

Gentlemen,—Here is a patient that presents a typical condition of the tongue that is rare, and which, when present, is often the forerunner of cancerous degeneration of the tongue, gums or mucous membrane of the buccal cavity. The patient is forty-three years of age; nativity, America.

Family History.—His parents both died of cancer. The mother had cancer of the breast, and the father cancer of the stomach. His maternal grandmother died of cancer of the breast, and his paternal grandfather died of cancer of the rectum. Not any of his uncles or aunts died of cancer. He has no brothers or sisters.

Previous Personal History.—As a child he had diphtheria, measles and whooping cough. Other than this he has always enjoyed good health.

Present Illness.—Two months ago his tongue, as he thought, became sore from the irritation of the pipe which he was smoking. Along the tip and edges of the tongue he felt a tingling sensation which seemed to be localized. Upon examination he found that on the tongue and along the edges were a number of whitish areas.

Habits.—He smokes excessively, either the pipe or cigars, and uses alcoholic beverages moderately.

Diagnosis.—This is a typical case of leukoplakia, the diagnosis of which is easy and is made entirely on the objective symptoms. Seldom do these patients experience pain or hypersensation, as in this case, which when present is often followed by anesthesia.

The word leukoplakia means a white plate or spot. The disease manifests itself on the tongue or on the mucous membrane of the mouth in the form of whitish spots or plaques, covered with thickened epithelial cells. There may be only one such spot present, but as a rule there are many, of irregular shape and with ill-defined outline, with a tendency to spread and coalesce. In fact, the entire mucous membrane of the buccal cavity may become involved. The disease may involve any portion of the mucous membrane, and cases have been reported where the plaques occurred on the vulva, the plaques being followed by epithelioma.

Pathology.—Pathologically it is a hyperkeratosis with a

*Lecture delivered in the Clinical Amphitheatre, Medico-Chirurgical Hospital.

downward growth of the rete-mucosum, and an epithelial increase of the interpapillary spaces, thus obliterating the papillæ. When such is the case we have produced a microscopic picture of tubular epithelioma with superficial degeneration due to the interference of the circulation, and malignancy may follow.

Etiology.—The true cause of this disease is not known. The most plausible predisposing cause is any irritation of the mucous membrane. Excessive smoking, as in this patient, syphilis, and rough teeth are said to be among the chief predisposing causes. In fact, I believe that syphilis has no relation with the disease at all.

Treatment.—We shall request this patient to stop smoking entirely, as should be done in all cases having the same disease. If the condition is of the superficial variety, as it appears to be in this patient, the disease may disappear spontaneously upon the removal of the irritation produced by the smoke. In some cases, especially when the deeper structures are involved, treatment is of no avail. However, in the early stages, cauterization with the actual cautery may entirely destroy the plaques and bring about a cure. Caustics, I believe, do more harm than good, and should never be employed.

We will first treat this patient constitutionally and give him a simple mouth wash to soothe the affected mucous membrane. Internally we will give him the following combination in the form of a capsule:

R	Creosoti (beechwood)	℥i
	Strychninae sulphatis	gr. 1-60.
	Podophyllitoxini	gr. 1-10.
	Salicini	gr. ii
	Pepsini	gr. ii.

Misce, fiant capsula no. i. Mitte no. xx.

Signa. One capsule four times daily.

For a mouth wash, we must select such drugs as are soothing, antiseptic and have slight astringent properties. The following combination possesses such qualities and unquestionably will afford the patient great comfort:

R	Acidi borici	ʒ i
	Creosoti (beechwood)	℥x
	Aquae rosae,	
	Aquae hamamelidis ..... aa	fl ʒ iii

Misce. Signa. Use as a mouth wash three or four times daily.

Selected Articles.

THE SURGICAL TREATMENT OF EMPYEMA.*

BY SAMUEL LLOYD, M.D., NEW YORK.

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Thoracentesis and thoracotomy for the removal of pus from the pleural cavity have been practiced since the time of Hippocrates. It is now generally conceded that there is but one treatment for the cure of a purulent pleurisy, that is, the immediate evacuation of the pus by some surgical procedure. The diagnosis, symptoms, and etiology are considerations with which we have nothing to do at this time. The diagnosis must depend upon the internist, and to my mind it is a just criticism from the viewpoint of the surgeon, that these cases are not recognized earlier and that they are not submitted to a more systematic and radical treatment as soon as the diagnosis is made. I am perfectly well aware of the difficulties sometimes encountered in making a diagnosis of empyema. At the same time I cannot help emphasizing the fact that this is frequently due to neglect of some of the diagnostic aids now available.

As Musser says, "it is no credit to the profession at the present time to send to the surgeon a patient with the chest half filled with pus, or even with half a pint or a pint of such accumulation." In my opinion the statement made by Ziemssen and Ewald that old cases of pyothorax should not exist, is absolutely true and cannot be too strongly emphasized. The presence of pus in the pleural cavity should be recognized, and as soon as recognized should be evacuated. It is sometimes difficult to determine at just what period a pleuritic effusion becomes purulent, and still more difficult, perhaps, to determine the presence and the exact location of localized abscesses within the pleural cavity or between the lobes of the lung. Even more difficult is the determination of those cases where the pus is localized between the diaphragm and the lung.

Unresolved pneumonias are frequently met with and treated by medical men without their being able to give any very satisfactory explanation of the reason why this condition persists,

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instead of pursuing its usual course. Jackson, in the *Boston Medical and Surgical Journal,* some two or three years ago, in studying this subject, called attention to the fact that an unresolved pneumonia very seldom exists, and Musser says that he has never seen a case to which he could apply this term. Unresolved pneumonias, however, are met with occasionally. I have seen a number of cases where there was undoubtedly a pneumonia present at the time I operated for an empyema, although this is extremely rare. In examining the histories of 400 cases of empyema which have come under my personal observation during the last fifteen or twenty years, I find only five in which the statement is made in the history that a pneumonia was made out, but since these statistics were compiled I have had two cases where it was undoubtedly present, and where I was able to demonstrate the fact to those who were present in the operating room.

Whenever the medical man has a case of pneumonia which does not resolve in the usual way, and particularly if there are evidences of pleuritic involvement, he should suspect a localized empyema, and should take every possible means of determining whether or not pus is present and responsible for the continuance of the symptoms.

A most interesting case of this kind has come under my observation within the past three or four weeks. The child was referred to me with the history of an unresolved pneumonia, and I made out an empyema occupying the upper half of the chest. Operation was undertaken, and the fluid, instead of being of the usual empyemic character, was brown and very offensive. The lung followed down after the removal of the fluid, so that the lower portion, which was already fairly well expanded, fully occupied its position in the chest, and the apical portion also expanded as the limiting adhesions were released. The upper portion of the lower lobe, however—the empyema was on the left side—did not expand, the result being that the lung had the appearance of a dumb-bell. On passing my finger over this contracted area, I found that it was solid, and expressed the opinion that it was an area of unresolved pneumonia. In order to clear up the cavity, it was irrigated with normal saline solution, and suddenly a section of this contracted lung, at least three inches by an inch and a half, dropped out into the free cavity. I immediately seized this piece and examined it, and found that it was a gangrenous portion of the lung, probably the result of the pneumonia. The space left on the lung was interesting because it demonstrated that the same thing goes on in pulmonary tissue that we get in other tissues where we have a localized gangrene. A free oozing of blood could be seen over the whole of the open

surface. No hemorrhage of any moment occurred, and a few washings with hot saline were sufficient to control all the oozing from the raw surface.

I could not see that this affected the child's condition in the slightest. The first two or three days after operation there was a decided amelioration in the symptoms, and at one time I even hoped that in spite of the grave condition of the child at the time of operation she might recover, but she was evidently too septic, and died on the sixth or seventh day.

Another condition in my experience, for which these localized empyemata are mistaken, is tuberculosis. I have had fully fourteen or fifteen cases where the physician had made the diagnosis of tuberculosis, although there was little or no expectoration, and in the little that was obtained tubercle bacilli were not found. In these cases, too, it seems to me that it is important, unless one has all the data necessary to make the diagnosis of tuberculosis definite, that the question of empyema should be considered. As we have already said, the symptoms are sometimes misleading, but the examiner must not allow himself to be prejudiced against the presence of pus, because he does not get any fluid on a puncture of the chest wall with an aspirating needle. One of the difficulties that we have noticed in our work is that many clinicians depend upon needles of too small calibre to determine the presence or absence of pus in the pleural cavity. We must also remember that a short needle may not reach through the thickened pleura to the cavity in which the free fluid is contained. The pus in an empyema is sometimes thick, filled with fibrin flakes, and will clog any needle except one of considerable size. So, too, we frequently find that the pleura is covered with half or three-quarters of an inch of coagulated fibrin, while the pleura itself will be materially thickened. It will be readily seen that in these cases the needle must be longer than the one usually employed for a simple exploration of the chest.

Personally, I do not believe that a small-sized exploring syringe, or a hypodermic syringe, should ever be used. The syringe should be of considerable size; or, better still, an aspirator should be employed. It is always a question how much benefit may be derived from aspiration of the chest in empyema, and there is such an abundance of literature on this subject that it is almost impossible to digest it thoroughly and draw conclusions from the facts we find recorded.

But whether we believe in aspiration or not, we should insist upon the exploratory puncture in all cases where we suspect the presence of pus in the chest cavity. In adults, at times, we can get a better indication for the point of puncture from the patient himself than from the physical signs. While we may have dis-

tant breathing, flatness on percussion, and all of the indications of the presence of fluid, the patient will indicate a spot, perhaps a little above or to one side of the point that we outline by our auscultation, where he complains of the greatest pain on pressure. This is the point for puncture. In children we cannot get this indication, but the fact that we do not get pus with a single puncture should not lead us to discontinue the attempt to make the diagnosis. The purulent focus may be comparatively small, containing perhaps not more than two or three drams of pus. This is frequently true in empyemas following pneumonia. Or it may be due to an interlobar accumulation; an abscess of the lung may also be the cause of the symptom.

The X-ray should be employed in these cases, and the picture should be of both chests, in order that they may be compared. We have recently had two cases of interlobar pneumonia, and one of abscess of the lung, in which the diagnosis was made by means of the X-ray.

In serous pleurisies it is also important that exploratory puncture should be more frequently employed. We must remember that there is a distinct difference between macroscopic and microscopic pus. A fluid which to the naked eye may appear to be simply serous may, when stained and put under the microscope, show the presence of a large number of pyogenic microorganisms. These cases are just as much empyemas as those from which we withdraw the usual creamy pus. They should be operated upon as soon as the diagnosis can be made. I am perfectly well aware of the general dread that the profession has of introducing an exploratory needle into the chest. That death has occasionally resulted is undoubtedly a fact; that pneumothorax has been caused not infrequently is also true; and that pyopneumothorax may occasionally result I do not deny. But that an aspiration of a serous pleurisy, made for diagnostic purposes, under the proper precautions, causes empyema, or is likely to produce dangerous symptoms, is one of the superstitions of surgery handed down from the period before Lister taught the necessity of cleanliness in ordinary surgical procedures.

The question arises, when this exploratory puncture for diagnostic purposes is made, whether something more should not be done. If we believe, as I do, that all cases of empyema should be operated upon as soon as possible after the diagnosis is confirmed, the question resolves itself to the simple determination of the procedure. Should we, at the time of making the exploratory puncture, take out more of the fluid than is necessary for pathological examination, or should we remove as much of the fluid as we can at this time? To a certain extent this will be determined by the condition of the patient. If there is a great

deal of fluid, if the patient is suffering from dyspnea, and if the vital forces are affected by the pressure, the heart impeded, and the general conditions bad, the operator should proceed at once to evacuate as much of the fluid as he can with safety. This almost invariably results in an improvement in the patient's general condition, and enables us at times to put the patient in a much better state for a radical operation, which can be done within a day or two. There is no question that a cerain number of cases of empyema can be cured by simple aspiration. Holt reported 121 cases in which he tried this method. Of this number 23 were cured, 6 died, and 92 were operated upon radically. From these results he argued against aspiration. To my mind the very fact that 20 per cent. of his cases were cured by this method illustrates the fact that it is an important procedure in certain types of the disease.

The great difficulty has usually been that medical men in the past have attempted to utilize this method to the exclusion of the other more radical procedures, but it is just as important in determining upon the proper surgical method in empyema as it is in any other surgical operation, and experience and surgical judgment must be the controlling factors in determining whether an aspiration should proceed at once to more radical measures.

In my series of cases we have had but 18 aspirations. Of these, two were cured and sixteen died. Many of these cases were practically moribund at the time of their coming to us for operation, and nothing more than a simple aspiration was possible; but the very fact that two of this small number got well without any further operative treatment, shows the importance of trying it when it is indicated.

It is evident from what I have already said, that I favor the early aspiration of the pleural cavity; and I believe thoroughly that we should adopt a certain mode of procedure. As soon as the physician is convinced, or has a suspicion of fluid in the pleural cavity, if it is showing signs of becoming purulent, or if he has an unresolved pneumonia, or a tuberculosis—and I want to emphasize the latter point, because I know I am in this regard at least taking a position absolutely opposed to the concensus of medical opinion—he should introduce a large-sized exploring needle, and withdraw a sufficient amount of fluid to submit to microscopical examination, and staining for the presence of micrococci. If these are present an aspirating syringe should be attached to the needle and all the fluid withdrawn. During this procedure, the patient should invariably be in the recumbent position, lying on the back with the chest wall beyond the edge of the table so that the needle may be introduced at the most dependent position of the pleura while the patient is in this

position. Many writers claim that the whole quantity of the fluid should not be withdrawn at a single sitting, but in my opinion all should be taken away that will escape through the needle. Sometimes during the withdrawal of the fluid, severe attacks of coughing, and even of syncope, supervene. Whenever these conditions occur, the withdrawal of the fluid should stop, and the opening should be sealed with collodion dressing. It is unnecessary for me to say, at the present stage of surgical work, that the whole chest should be prepared exactly as though you were intending to do a capital operation; that the needle and all other instruments employed should be boiled; that the operator's hands should be just as carefully prepared as though he intended to perform a laparotomy; and that all of the surrounding areas should be covered with sterilized towels. The use of an exploring needle that has not been properly sterilized, pushed through skin that has only been washed off with alcohol by hands that have not even been washed, is an invitation to serious infections, for which the operator should be held criminally liable.

Pneumothorax, or pyopneumothorax, may occasionally be produced by the introduction of a needle, but they will be only occasional accidents; and in case they occur and are recognized at the time of aspiration, the surgeon should proceed at once to an opening of the chest cavity and to thorough drainage of the pleural space. If in the course of the aspiration it is determined by auscultation that the lung is coming down and expanding to fill the chest cavity, the operator may be perfectly satisfied with the simple removal of the fluid. If, on the other hand, it is found that the lung does not expand and that the breath sounds cannot be heard over the whole of the chest wall, a more radical operation is indicated and should be performed as soon as the condition of the patient will permit. In cases of emphysema, which occasionally result from aspiration, thoracotomy should be performed. I have been asked in what cases I expect a cure through simple aspiration. Of course this question applies to cases where empyema is fully established. I have found that the best results have been obtained in those where the pneumococcus is the cause of the disease. Here frequently the fluid is localized, and a single aspiration results in a definite cure.

The fluid will reaccumulate in many of these cases in a very few days. Within the past few weeks I have operated upon a woman at St. Francis' Hospital, from whom three quarts of fluid just beginning to change was withdrawn, and two days later a second aspiration gave two and a half quarts. I operated the second day after the last operation, and two quarts more escaped at the time of the operation.

The statistics of this method of operating have improved with

experience, just as the statistics of almost all surgical procedures do. Thus we find that Dupuytren had only two successful cases in fifty, and he said that he preferred his patients should die by the hand of God rather than by the hand of man. Sir Astley Cooper had only one successful case; Gendrin, not one out of twenty. Bowditch, on the other hand, up to 1882, had operated 386 times in 245 cases without a single fatal result, and with only one in which alarming symptoms supervened. Dieulafoy reported 150 without an accident; and one might continue with statistics up to the present time that would carry the numbers into the thousands.

Thoracotomy should be performed in all cases where it is demonstrated that the fluid is purulent and the lung still capable of expansion.

The question of the removal of a rib is one that should be left to the judgment of the surgeon. The problem in all of these cases is the obliteration of a pus cavity, and this can only be obtained by complete evacuation of the contained fluid and coaptation of the abscess walls. If there is sufficient room between the ribs to provide for complete drainage of the cavity, and the lung expands so as to fill that cavity when the fluid is withdrawn, no further operative procedure should be employed; but the surgeon should take into account that in all these cases there is at least a temporary, and sometimes permanent, retraction of the chest wall, and that this may be enough to bring the edges of the ribs so close together that the drainage tube will be occluded. In these cases a section of rib should be removed.

Expansion of the lung can only take place where the adhesions are not too firm, and where there is not an unresolved pneumonia or an extensive tubercular focus. A too rapid expansion of the lung is also dangerous, and is the cause in my opinion of some of the deaths that have resulted from aspiration. The fluid has been withdrawn too rapidly, allowing the lung to expand suddenly, and this rapid expansion causes an aspiration of the pulmonic veins, with their consequent collapse. The pressure of the blood from the heart is not sufficient to re-expand these vessels and allow of the return of the blood through its natural channels. The same thing may occur by a too rapid evacuation of the fluid in any method of operating, and care should be taken to see that the expansion of the lung does not take place suddenly, but that it is very gradual.

In the tubercular conditions, it is very important that a too rapid expansion should not occur, as a dangerous hemoptysis might result.

I have very little sympathy with the quibbling that has gone on over the question of resection of a rib. To a certain extent,

this must be determined by the condition of the fluid. If the condition is due to some of the micro-organisms that are not particularly virulent, and if the adhesions of the lung are of recent formation and not too dense to prevent its expansion, and if the intercostal space is sufficiently wide to allow the insertion of the drainage tube without compression, the probabilities are that the simple incision between the ribs will suffice.

On the other hand, if the pleura is markedly thickened, and there are large masses of coagulated fibrin, and if the condition is due to the more active pyogenic organisms, the suppurative process will keep up for a longer time and the gradual retraction of the chest wall will so decrease the size of the opening that drainage will not be efficiently performed and consequently, in these cases, the resection of the rib is essential. Personally, I cannot see that the question is one that admits of much argument. The time required to resect a portion of a rib is so little more, and the consequent shock so slight and the drainage so much more efficient, that I favor this procedure in practically all cases. The better inspection of the pleural cavity that can be made through an opening after a rib is resected, and the determination of the exact condition of the lung and of the pleural cavity, demonstrating at once whether simple drainage will be sufficient to cure the case or whether some further manipulation is necessary, is sufficient to compensate for the slight extension of the operation.

I have used incision and drainage only 18 times. Of these cases six were cured, two improved, and eleven died. Simple resection of the rib has been performed 45 times, with 12 cured, 18 improved, and 15 died.

It must be perfectly obvious to any one who has studied this question, that the problem is not simply one of the evacuation of pus, but that we must go further and make sure of the obliteration of the suppurating cavity. If we accept this fact, it must also be obvious that in a certain number of instances a simple thoracotomy, or a thoracotomy with the resection of a rib, will not be sufficient to effect a cure. The rigid chest wall cannot fall in for any distance, and the lung bound down by adhesions will not sufficiently approximate the chest wall to allow of apposition of the pleural surfaces. Thus a permanent suppurating cavity is left with a persistent empyemic fistula. If the operation is done early, when the adhesions are slight, and when the expansion of the lung follows the evacuation of the fluid, one may reasonably expect a cure; but in my opinion this should be determined at the time of the operation. Many experienced operators have adopted the additional method of freeing the lung from its adhesions at the time of doing a thoracotomy, in

order to allow increased expansion. Simple liberation of the adhesions, however, is not of itself sufficient to completely obliterate these large cavities.

Brinkman emphasizes this especially, and advocates that the adhesions should be separated—gently if possible, but by incision or blunt dissection if this is essential to their liberation. Wharton also says that it is a mistake to drain without having broken up adhesions. Steele calls attention to the fact that the difficult portion of the cavity to obliterate is the upper portion—up in the apex, and this corresponds with my own experience. In many of the old cases of empyemic fistula that have come to me for secondary operation, I have found that the lower portion of the lung was fully expanded and adherent, excepting for the fistulous tract leading up to a cavity in the apex. It is therefore quite as important that this area should be fully expanded as it is to get expansion in the lower portions.

In these cases of thoracotomy, as we have already said, cure will result when the lung expands; but another cause for the persistency of the sinus is tuberculosis. Cheyne says that in tuberculous empyema operation is not satisfactory and should be avoided if possible, because the cavity is not likely to close, and this position is taken by many observers. Unfortunately, it is frequently impossible to determine beforehand whether or not a case is tubercular. Some observers insist that all the cases where the pus removed from the pleural cavity is sterile are of tubercular origin. If this were accepted as a fact, a very considerable number of our cases would not be operated upon. I am not in sympathy with the avoidance of operation in cases of tubercular empyema, where the tubercular focus is confined to the pleura or to the lung of the affected side. The results will be bad, necessarily, in operating upon this class of cases, but that is no reason why we should not remove the pressure from the lung and give it the benefit that will result from better expansion; and if the pleura is the seat of the tubercular disease, take the opportunity to treat it locally. More experimental work should be done along this line, and I hope that in the future my opportunities for operating upon tubercular cases may be large enough to enable me to draw some more definite conclusions of the results that we may expect from this procedure. If we can get an improvement in tubercular peritonitis by a simple laparatomy, or by washing out the peritoneal cavity with peroxide of hydrogen, or if we can improve tubercular conditions in other serous sacs by excision and drainage, should we not make the attempt in these otherwise hopeless cases to benefit them by some similar procedure?

The other methods of operating for empyema apply only to

neglected cases, and if we could only get these patients to the surgeon early enough our discussion of this question might stop here. Unfortunately, however, we have large numbers of cases where the diagnosis is delayed, and where the surgeon must undertake much more extensive operations in order to obliterate the abscess cavity.

In 1893, Fowler and Delorme suggested decortication of the lung as a method of closing these old cavities. This was undoubtedly a great step forward, as it did not call for the extensive mutilating operations upon the chest wall that had previously been employed. Ransohoff, of Cincinnati, has suggested a method which he calls discission of the pulmonary pleura, a description of which was published in the *Annals of Surgery*, April, 1906. This is simply a modification of the Fowler-Delorme method, by using multiple incisions instead of decortication. Unfortunately, it was found that in a certain number of cases it was impossible to liberate the lung from its overlying pleura, owing to hemorrhage or some other complication, and the results were not so satisfactory as we hoped they might be. Delorme claimed 30 to 40 per cent. of cures. Cestan showed 40 per cent. cures, 11 per cent. improved, and 35 per cent. not improved; 14 per cent. died. Fowler's report covered 30 cases: 17 cures; 9 no cure; 3 deaths; and one doubtful. Kurpjweit, comparing these statistics with those of extensive resections of the chest wall, says: that of the latter 56.3 per cent. were cured; 20 per cent. improved; no improvement, 3; and 20 per cent. deaths, while he says the combined statistics for decortication show only 33.9 per cent. cured. He believes that most of the success in these cases is due to the extensive resection of the ribs that is necessary, and to the consequent falling in of the chest wall.

My own experience has convinced me that this operation has a comparatively small application. Nevertheless, there are a certain number of cases where the decortication is easy and where the results are extremely satisfactory. In these cases it should undoubtedly take precedence over the more mutilating operations of Schede or Estlander. In some of the cases where expansion of the lung is not complete after a decortication, it may be combined with the Schede operation, and in that case the probabilities are that as large a resection of the ribs will not be necessary as if the decortication were not used.

I operated upon 20 cases by the Delorme-Fowler method in which 7 were cured, 5 died, 5 were not improved, and in 3 the operation had to be suspended on account of hemorrhage.

In the Schede-Estlander operation, with its many modifications, the chest wall is made to fall down and come in contact

with the collapsed lung. It is impossible in this paper to go into a general consideration of this operation. It is so extensive, and involves so much surgical experience, that it must always remain the operation of the surgical expert. I have personally operated but five times in this manner: 1 cure, 3 improved, 1 died. The reason that more operations of this kind have not been performed by me, I believe to be due to my present method of operating. I believe that it is invariably better to make an elastic organ fill the cavity which it should occupy, rather than to attempt to make the inelastic wall fall in against the collapsed lung.

My present method of operating is as follows: Incision parallel to the rib, selecting preferably from the 6th to the 8th along the posterior axillary line, according to the size of the chest in children, and the possibility of being able to reach with the finger both the apex and the diaphragm. If the chest is too large to allow digital exploration by the removal of a single rib, then two or even three should be resected before opening the pleura. The piece removed should be from 2 1-2 to 3 inches in length. The anesthetic, in my opinion, should be ether, and the success of the operation depends very largely upon the proper regulation of the anesthesia. The patient should be completely anesthetized until the ribs have been resected and the operator is ready to incise the pleura. It is then my rule to order that all anesthesia shall cease at once, and before the pleura is opened. One reason for this is because occasionally we find that the fluid is evacuated very rapidly in spite of all attempts to control it, the intrapleural pressure being so great that it bursts through the pleura as soon as the soft parts and the ribs have been removed; and in these cases if the adhesions are recent the lung breaks away from them, fills the pleural cavity, and at the same time a large amount of the anesthetic is inhaled. A more important reason for stopping the anesthetic is to allow the patient to recover gradually during the remainder of the manipulation. After the fluid has drained away, the pleura is incised to the full extent of the incision in the soft parts and the cavity is thoroughly inspected. Masses of coagulated fibrin are removed, and if the pleuræ are covered completely by this material it is scraped away with a sharp curette. All of this debris should then be washed out with hot saline poured into the wound from a pitcher. The position of the lung is now outlined, and the confining adhesions separated with the finger if possible, if not, by a blunt dissection with a curved periosteotome, keeping as close as possible to the chest wall, and if they are too dense to be separated in this way they should be cut with a curved pair of scissors. The sweeping of the finger over the pleura in the course of this operation causes the now partially anesthetized patient to cough,

and with each forced expiration the collapsed lung is seen to expand. This should be continued until full expansion of the lung is obtained. Frequently it will push out through the wound, and often it is possible, before the patient begins to cough, to draw the lower end of the lung out and then watch it expand on the outside of the chest wall.

Unless the patient is pretty well over the effects of his anesthesia, this procedure cannot be carried out, because in these inflamed pleural cases there is no response to pleural irritation under complete anesthesia, and consequently no cough. This is the essential part in the success of the operation. The healthy lung must be made to pump up the collapsed lung, and that expansion must be sufficient to bring both pleural surfaces into complete apposition or else we cannot expect a cure. It is true that in breaking these adhesions we sometimes tear the lung and open a bronchus. This is unfortunate in that it interferes to a certain extent with the full expansion of the lung, but if the opening is so large that the air does not expand the lung as it rushes in during coughing, the operator should put his finger or a piece of gauze over the opening, making just enough pressure to prevent the escape of air, but not enough to interfere with the gradual expansion of the lung itself. Otherwise, this accident is of no moment, as the opening will close spontaneously.

Drainage is an important question in these cases where the lung is expanded. The long drainage tube formerly used keeps up the pleuritic cough, and consequently had to be given up. Brinkman has suggested getting rid of all drainage tubes by suturing the pleura to the skin, but this has the disadvantage of necessitating a second operation for the closure of the sinus. The flat spool drainage tube, made at the suggestion of Dr. H. D. Furness, has answered the purpose admirably in my hands.

The total number of cases upon which this paper is based is 400. Of this number, 171 were cured; 114 improved; and 115 died. Of the latter number, 15 were moribund on admission; 3 died of diphtheria; 8 of shock; 2 had been operated upon at other hospitals and were brought in in serious condition; 3 died of nephritis; 3 of general sepsis; 2 of peritonitis; 1 of carbolic acid poisoning; 8 received no treatment on account of their condition; 1 had Potts' disease; 1 volvulus; 1 was tuberculous; and 2 had septic meningitis; 27 cases died of exhaustion in from six days to three months; 4 cases of double empyema; and 20 were cases of simple incision and drainage; 9 of aspiration; and 5 from the Delorme operation.

The cases operated upon by this method of expanding the lung, in which the histories were absolutely complete, number 225: 97 were cured; 58 were improved; and 47 died. Only 15

of these 47 deaths should be included in the statistics of the operation, the others dying of intercurrent conditions not referable to the operation itself. The full table of the causes of death will appear in the March *Annals of Surgery.*

We have had seven cases of double empyema. Of these 2 were cured, 1 improved, and 4 died. These cases were not included in the previous statistics. The general rule is not to operate upon both sides at the same time, and we have ordinarily adopted that method, first aspirating one side, allowing the lung to expand as far as possible, and then after a few hours operating on the other side and taking the aspirated side some days later when the adhesions would hold the expanded lung fairly well in position. In one case, however, we did operate upon both sides at the same sitting, having first expanded as far as possible the lung on one side, fastening a compress over the opening, and proceeding to operate upon the other. This child recovered.

We have not attempted to go into the full consideration of the bacteriological findings in all of these cases, but have taken 50 at random, with the following results:

Pneumococcus	17
Echinococcus	1
Pyocyaneus	1
Pneumococcus and streptococcus	5
Staphylococcus	8
Bacillus tuberculosis	1
Pneumococcus and staphylococcus	5
Pneumococcus and colon bacillus	1
Pneumococcus, streptococcus and staphylococcus	1
Streptococcus	3
Streptococcus and staphylococcus	2
Negative	5
	50

In 181 cases, also taken at random from the total number, we find the following etiological factors:

Pneumonia	109
Pleurisy	7
Measles	11
Measles and pneumonia	4
Bronchitis	7
Typhoid fever	1
Scarlatina and pneumonia	2
Diphtheria and pneumonia	4
Subphrenic abscess	2
No cause given	32
Following trauma	1
Tuberculosis	1

—*Medical Review of Reviews.*

ANTISEPSIS VERSUS ANTIPYRESIS.

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It has been admitted by many able men that, so long as a specific is unknown for the curing of the infectious diseases, reasonable experimentation is legitimate and the discussion of the same not improper. Until the absolute specific has been made known it is rational for others to differ in their opinions quite honestly. In differing, they should concede the same as they expect: the benefit of the doubt as to purity and honesty of purpose.

As an illustration, take croupous pneumonia. The text-books of to-day give about the same rate of mortality as was described twenty-five years ago. Yet many of our most eminent teachers honestly prefer to cling exclusively to hydro-therapy, until the specific antitoxin has been discovered.

In order to reduce the high rate of mortality, it seemed plausible to me, that there might be some chemical substance which could be placed within the human economy that would interfere with or check the excessively rapid multiplication of the specific cocci of this as well as the specific bacteria of the other infectious diseases; or else to effect the chemical neutralization of the toxemia following the infection, so as to prevent some of the causes of that profound pneumococcus septicemia and the other effects of toxemia.

In harmony with this thought I first tried aniline, as an internal antiseptic, in minute doses. The action was so depressing that I desisted before there was any moderation in the severity of the symptoms of the disease. When acetanilid was introduced, under the name of antifebrin, I used it because I had read that it was an antiseptic as well as an antipyretic, and my result seemed satisfactory. Suddenly, like a thunder-clap from a clear sky, I had a case of collapse, following the administration of six grains, that seemed to portend immediate death. With a liberal use of nitroglycerine, strychnia and whisky, recovery was accomplished. The fright caused me to ask myself: "Was I carelessly handling a loaded gun?"

After this experience I used phenacetin (acet-phenetidin) and found it much safer. Then the question arose: What is the difference between the two? I could see the effect, but failed to understand the cause. All of the medical literature that I referred to was entirely barren of information of the nature of the composition of either. That master-mind—Horatio C. Wood

—had made too firm an impression upon me of the duty to know the physiological action of my remedies, as well as the entire nature of their composition, to let the incident pass unheeded. Thus my spare time between hours, during a period of five years, was spent in an effort to learn the reasons why. The two compounds were constructed from the very bottom up, in a laboratory arranged for the purpose in my own home, under the guidance of an able chemist. It was some time before the real reason of the therapeutic difference between those two coal-tar derivatives dawned upon me. Acetanilid was used by me afterwards solely as an acetylized aniline, so protected or controlled, because of that acetylization, that it was gradually split up into its elements, and thus liberated more slowly and steadily in the system, to there combat the enemy that was producing the disturbance. Phenacetin (acet-phenetidin) is an *acetylized* nitrophenol which had been *alcoholated* and deprived of much of the poisonous by-products that are found in conjunction with carbolic acid.

As a coincidence to accentuate this line of thought, many months were afterwards spent in fighting death from pyemia; the result of a wound received in the performance of my professional duty. During this time I had plenty of opportunity to feel the effects of streptococcus poisoning and to note the entire absence of the symptoms of intoxication, which might be expected from a daily consumption of over one quart of whisky, covering a period of ninety days, and of twenty-four ounces a day for the next succeeding three months; notwithstanding the fact that I had previously been entirely free from the use of the same. My intellect was never clearer than during the period of this combat. At the same time, over two and one-half gallons of water, in frequently divided doses, was consumed in every twenty-four hours, for the purpose of elimination.

To my mind, the beneficial influence which had been obtained from the large quantity of alcohol consumed, was not altogether to be confined to its property as a stimulating food and its power of exciting the emunctories to rid the system of effete material. I was fully convinced that much of the benefit derived came from making the fluids of the body an undesirable medium for the culture of the specific bacteria—thereby inhibiting their excessively rapid multiplication—and from more or less of a sedative influence on increased cell activity, which had been incited from the invasion of those infernal streptococci.

The resulting incapacities from that awful conflict with death compelled me to regretfully relinquish much of my practice. Since then, in entire harmony with my chosen calling, much of my mental energy has been devoted to so harness and

control antiseptic agents which would have no injurious action upon the organism and yet serve to retard, or in some way inhibit, the excessively rapid multiplication of those fiendish micro-organisms, that sufficient time might be gained to enable the emunctories to rid the system of much of the cause of toxemia, and that also there might be more effectually accomplished that to which I have given the credit of doing, in my own case, to the alcohol. (See NOTE.)

The phenol group appealed to me as possessing much of the nervous sedative quality in addition to the antiseptic. This prompted me to associate the eliminative antiseptic virtues of the salicyl group with the sedative antiseptic virtues of para-amido-phenetol, an ethylated nitrophenol to which the hypothetical radical NH_2 has been added for its combining quality. From the standpoint of a physician desiring to so blend his therapeutic agents, to accomplish certain results, I have, by chemical condensation and reduction, so completely harnessed these substances into an almost tasteless bland powder, which is technically acetyl-salicyl-phenetidin, the substance now known under the name of A—s—phen. So slow is the acetyl and salicyl cleavage from the alcoholated phenol derivative, that there has been practically accomplished the entire avoidance of the irritating, stomach distressing and heart depressing qualities of these agents. There is thus placed at the service of the sick what never could be enjoyed if dependent upon a mechanical mixture of the same. It is a very much improved form of salol, for it is well tolerated and there is no uncertain quantity of phenol to be suddenly liberated in the system. Like salol, it is a gastro-intestinal as well as a urinary antiseptic, thus retarding, at least to some extent, the rapid multiplication of the germs of the disease. It has a calmative influence upon the nervous system and thus offsets some of the nervous irritation from the onslaught of the invasion by the pathogenic germs. It stimulates the emunctories of the system, with the consequent elimination of many of the toxins and of the waste products due to faulty metabolism and of the purin bodies or xanthine bases resulting as decomposition products of cell nuclei and of nucleins. It seems to possess the stimulating and antiseptic emunctory value of acetyl-forma-sal (another one of the synthetic compounds of my creation), which has been used with such marked success in inflammatory and articular rheumatism, and which is used in the Hospital of the University of Pennsylvania, and several other most reputable institutions, for rheumatic conditions and for the purpose of sterilizing the urine in cases of gonorrhea and cystitis.

I should feel damnably culpable to use such a remedy in the treatment of thermic fever, or what is commonly known by the

name of "sunstroke." To remove this excess of temperature the only one remedy is hydro-therapy, ice-cold at that, if the hyperpyrexia is 106 deg. or more. Thermic fever is entirely different from the high temperature of an infectious disease. There is here no question of a circulating toxin to be eliminated. Simply an overwhelming of the heat-regulating mechanism where the system is unable to dissipate the heat rapidly enough.

When the fever is produced from the sepsis, arising from an abscess, it would not seem rational to treat such a condition as a fever, when it is very evident that the indication is a surgical interference. Neither would it seem rational that, because the heart is here beating much faster, it should be knocked down in its action with any heart depressant like aconitine. The surgeon's knife will remove both the fever and the accelerated pulse rate.

But, when the fever occurs in the course of an infectious disease, where no abscess has formed, where there is a decided disturbance of the heat-regulating centres from the invasion of the micro-organisms, where there is much increased metabolism and also poisoning or toxemia, with a consequent degeneration of the vital organs of the body and a decided interference with their proper functioning, then I think it rational to try to do something towards removing the cause of the disturbance. The results of the fever are feared. There is here no indication for surgery. The primary cause is not removable by hydro-therapy. In order to treat the patient and make war on the enemy at the same time, I think that we should try to make the human economy an unpleasant abiding place for the microscopical germs which produce such visible distress.

When it is so easily demonstrated that the urine has been rendered sterile, is it not rational to believe that the other fluids of the body have been made proportionately so, and thus retarding to a certain extent the rapid multiplication of the diabolical germs? When it is so easily demonstrated that both the liquids and solids of the urine have been increased in amount voided, in association with the moist mucous membranes and a slight perspiration, is it not rational to believe that you are removing some of the cause of toxemia? When, because of these facts, associated with the more or less correction of the defects of the faulty metabolism, in conjunction with the antifermentative influence in the gastro-intestinal tract, with the avoidance of tympanites and the reflex irritation of the heart and brain from the same, can you not appreciate why there is a mildness of the fever process, little delirium and less exhaustion and heart failure (the result of toxemia), and understand why convalescence is sooner established and less prolonged? Experience has taught me that

cardiac stimulants are not needed *before* the cumulative effects of the toxemia and pyrexia have brought about that condition described as heart-failure. That by avoiding as much as possible the effects of toxemia and pyrexia and disturbance of the nervous system through antisepsis, elimination and nervous sedative action, it is easier to control the heart action and maintain a more marked equilibrium between the heart and vessels and a consequent uniformity of strength of the heart sound and force of the pulse. That when any irregularity of the heart action did occur, the very identical cardiac stimulation that is used by those depending upon hydro-therapy would stimulate just as quickly, if not more so. In fact, that there is nothing incompatible with the combination of such a treatment with hydro-therapy. That strychnia will tone up the vascular system and stimulate the heart; that digitalis, caffein, nitro-glycerin, camphor and alcohol will produce just as quick response, if not more so.

In-so-much as a treatment removes the specific cause of a disease, then-as-much does it become a specific. In-so-much as a—s—phen inhibits fever as an antiseptic, nervous sedative and stimulant of the emunctories, then-as-much does it become an antipyretic. For the dissipation of heat already formed, hydro-therapy is most valuable. For the inhibition of the cause of the fever process, then, the use of an internal antiseptic is worthy of a trial. Many much more eminent men than I entertain the very well-known belief that an elevated temperature is a conservative process, and that, in any given disease, its presence is more desired than contra-indicated; in-as-much as it is held that during the fever process the affected organism is enabled to produce its own peculiar antagonist; or, if a poison, its own antitoxin. This may be true in some instances, but I have always felt that they were very few indeed, and that the fever process was doing a greater degree of harm by its action upon the various vital organs than could be estimated by its effects upon the blood, more especially so in pneumonia.

The hydro-therapeutist claims that fever rarely requires active treatment in croupous pneumonia, a constitutional disturbance accompanied with a local manifestation by no means commensurate with the systemic toxemia. He admits that where the nervous or cardiac symptoms are severe, not from the fever generally, but from the toxic condition, ice bags and cold coils and cold wet pack, applied to the head and heart region, or bathing, are useful. This is absolutely true, and no sane man takes exception to these facts. Yet I do not comprehend how the application of cold packs, etc., to the head and heart region can remove any of the cause of that toxic condition, unless it be by reduction

of temperature, and that then the bacteria of the disease multiply less rapidly than at an elevated temperature. General bathing removes much of the toxemia, which is the greatest source of danger to the patient, but it is not in every case that such can be properly used, and it does not satisfy my impatient temperament *to do something to remove the cause* of the toxemia, whereby the bacteria of the disease will multiply less rapidly, and at the same time preventing the formation of fever and retarding that morbid intoxication from the infection, which I have aimed to do, by the intelligent use of a substance which is well tolerated by the system and which is capable of accomplishing much more good than it is at all possible to do harm; more especially so, when it has proven itself to be a most valuable nervous sedative in the treatment of "*brain fever.*"

It has been my custom to take the torch in my own hand and to satisfy myself from hard experience. Perhaps H. C. Wood's vivid description of his personal experience from an overdose of cannabis indica was responsible for much of it; but, when the fate of battle changed my relationship in my profession, and I found myself answering questions from those using the products of my creation, then I invariably made myself the subject for as much of that experience as was at all possible to do. To my mind, it is a crime to recommend or permit others to prescribe any medicine in such grave conditions as are met with in the infectious diseases, without first completely satisfying one's intelligence of its utility; and a man will do that without being biased. Consequently, I have never recommended that others prescribe greater quantities than I have. I have never seen any untoward effects from its proper use. On the contrary, by its employment I have saved several cases of croupous pneumonia where the temperature reached as high as 106.2, 106.4, and 106.8 degrees, which I am fully satisfied would have died had only such treatment been instituted as was taught at the time of my graduation, or that taught by some of my critics—who have called me more than harsh names for advocating the theory here expounded—who, with the same breath used to condemn the use of "all coal-tar remedies," advise the use of salicylic acid (nearly all of which that is used is made synthetically from carbolic acid), and salol, a most typical coal-tar product. Fire and water were both placed at our service by our Creator. Many innocent lives have been sacrificed to them; but when man's intelligence controls them they are invaluable.

It is absolutely unfair to use such coal-tar derivatives as salol—where the cleavage of unprotected carbolic acid is so readily split off—or to use aconitine or veratrum viride and similar heart and circulatory depressing remedies at the

same time, and then blame such remedies as here described for any irregularity of the heart action that might occur.

In using remedies, I have always relied upon their value by securing their indicated physiological action whenever it was possible to do so, and then maintained just sufficient dosage to secure the effect desired. From this experience I have learned the value of an initial dose of twenty grains of a—s—phen, followed up within a half-hour with ten grains more if the effect desired was not obtained; if so, the time is to be extended to an hour, or two, or three hours apart, using as my guide the appearance of a slight perspiration, moist mucous membranes, and the extent of the fever.

Pending the discovery of the specific antitoxin for each of the various infectious diseases, the statements of many impartial and absolutely disinterested physicians of ability, that they have stayed death through the intelligent use of this product of my creation, and the remark of a specialist of national reputation residing in Asheville, N.C., "It was worth the trip to Philadelphia and Atlantic City to find something that did not cause his tuberculous patients to perspire as did phenacetin," are sufficient warrant for its existence and a testimony that my efforts have not been in vain.

NOTE.

As a result, I have created the following organic chemical compounds, all of which are entirely ethical, there being no secrecy whatever in the nature of their composition, and which fully comply with every requirement of ethical physicians and of all legally warranted and duly constituted impartial Food and Drug Laws of every civilized government.

Guaialin, or the benzoic acid ester of methylene diaguaiacol. It is a pea-green colored amorphous powder, and is a most efficient anti-tubercular, anti-catarrhal and internal antiseptic.

Camphacol, or the camphoric acid ester of methylene diguaiacol. It is a white, crystalline powder, which is quite valuable as a stimulating anti-tubercular and nervous sedative.

Acetylformasal, or acetylmethylene disalicylic acid, which is unsurpassed as an anti-rheumatic, and of more than usual value in arthritis and gout and as an urinary antiseptic.

Iodomuth, or bismuth oxyiodide methylene digallate. An iodine-bearing compound so stable as to retain its iodine on standing in the presence of air and light, and to be entirely unirritating, but still in sufficient weak combination as to yield the full therapeutic value of iodine by the enzymes of living organisms. Its desiccating, sedative and antiseptic properties make it of great service as a stimulating, soothing protector and as an ideal remedy in tubercular diarrhœa, gastric ulcer and in typhoid fever.

Sodi-forma-sal, or methylene disalicylate of sodium. Supplants salicylate of sodium for the removal of the pain of neuralgia, as well as that caused by various imperfectly oxidized matters. Very valuable in rheumatism.

Kali-forma-sal, or methylene disalicylate of potassium. Analgesic, anti-rheumatic and antiseptic.

Cal-forma-sal, or methylene disalicylate of calcium. Not soluble in water. Useful in gastro-enteritis and the summer diarrhœas of children.

Bis-forma-sal, or methylene disalicylate of bismuth. An intestinal antiseptic and sedative of great value. Being insoluble, it reaches every portion

of the intestines, which it coats with a protective covering and shields from further irritation. Valuable in the treatment of fermentative dyspepsia, enteritis, etc.

Cad-forma-sal, or methylene disalicylate of cadmium. Used externally as an ointment in proportion of forty grains to the ounce, in the treatment of scrofulous glands.

Cu-forma-sal, or methylene disalicylate of copper. Useful in cholera morbus and asiatic cholera.

Fer-forma-sal, or ferric methylene disalicylate. Indicated in the treatment of the uric acid diathesis and rheumatic affections complicated with anæmia.

Am-forma-sal, or methylene disalicylate of ammonium. Indicated in the treatment of pneumonia and as a douche in chronic ozoena.

Lithi-forma-sal, or methylene disalicylate of lithium. Anti-rheumatic, anti-neuralgic and antiseptic.

Bari-forma-sal, or methylene disalicylate of barium. Alterative in rheumatism and in sclerosis when complicated with functional cardiac disorder, as well as valvular disease of the heart.

Stron-forma-sal, or methylene disalicylate of strontium. Much preferable to iodide of potassium in rheumatism complicated with weak heart.

Alumi-forma-sal, or methylene disalicylate of aluminum. As a dusting powder in rhino-laryngological practice for catarrhal practice.

Zinc-forma-sal, or methylene disalicylate of zinc. Of service in chronic skin disease, night sweats and fermentative dyspepsia.

Diurazin, or theobromine-acetyl-methylene-disalicylate. A stimulant of the vaso-motor centre and the renal epithelium, with an antiseptic influence over the urinary mucous membranes. It primarily stimulates the heart action and secondarily strengthens it, with an increased regularity of the pulse, by removing the cause of its depression, in reducing the dropsy through the increased diuresis. Owing to the elimination of the urinary solids, the specific gravity of the urine is little reduced.

Caf-forma-sal, or caffein-methylene disalicylate of sodium. Quickly and completely soluble in cold water. A cerebral, cardiac and nephritic stimulant. At the same time a true antipyretic, diuretic and genito-urinary antiseptic. Whilst it is stimulating the epithelium of the uriniferous tubules it is also invigorating the muscular tissues and imparting tone and force to the heart action, thus increasing the excretion from the kidneys in the amount of both the solids and liquids of the urine.

A-s-phen, or acetyl-salicyl-phenetidin, is, in other words an ethylated phenol derivative which has been chemically combined with acetic and salicylic acids. It is a white, crystalline and almost tasteless powder, which has definitely chemically compounded in it 46.15 per cent. of salicylic acid, yet the same cannot be tasted; nor does it disturb the stomach or depress the heart, and is in every way well tolerated. It is far safer than salol. It has marked antiseptic, anti-neuralgic and anti-rheumatic properties, and is generally used where a therapeutic agent is indicated for the relief of *fever* and *pain* in doses of five to twenty grains.

PRACTICAL ELECTRO-THERAPY.

The busy physician who contemplates the purchase of an X-ray apparatus, unless he has had experience in the handling of such, is at once confronted by the all-important question, what to buy. He takes up one of the medical journals and sees the many advertisements, where each manufacturer claims to have the only good one. He sends for catalogues, and is still more mystified by the divers declamations and open assertions in the letters following, that this or that machine is the only perfect one ever made, and to beware of all others. He may even receive a fac-simile of a "Gold Bond" to be given with the machine. When he has read all these statements he is in a worse quandary than when he first started out. If he intends to do radiography, and treatment, he should consider the following essential points: The apparatus must deliver a uni-directional current. The maximum current intensity should not be less than ten milliamperes. The wear and tear should be slight. The parts which are subject to wear should be readily accessible to inspection and duplicatable at reasonable cost. The entire apparatus should be compact and have a reasonable guarantee.

The doctor is generally undecided whether to buy a static machine or a coil, and often buys in haste to repent at leisure. If he has bought a static machine, no matter what type, he soon finds out its shortcomings, when attempting radiography, and wants to swap it for a coil, but finds that he has an elephant on his hands, both as to size and cost *versus* actual value.

A static machine—often dubbed a "High tension generator"—is, at its best, inefficient. Careful and extended experiments with all modern types have shown that they develop, at best, less than one-half milliampere of current, which is insufficient for speedy X-ray work. The static machine is excusable only when no electric service is available for operating, and has to be operated by water power or by a hand crank, though the latter mode of operation is not very dignified. Often, also, the static machine is purchased for its splendor of monster brass balls, rods and plate glass, the desire being to produce psychic effects by means of these gewgaws. Such ideas smack of charlatanism and are not worthy of the medical profession.

The suggestion is here made that a modern fire-engine would likely serve the same purpose.

Often the assertion is made by a manufacturer, that by choosing material other than glass, for the revolving plates, and increasing the speed, the current quantity will increase directly with the speed. This delusion has caught many, because they are

not acquainted with the fundamental facts underlying current generation, and naturally assume that figures don't lie, but if anything is more delusive than facts it is figures. If you get a certain amount of current from a glass-plate static machine, at a speed of, say, 500 revolutions per minute, a mica-plate machine running at a speed of 1,500 revolutions will not give three times that quantity of current, and a sensitive milliameter will prove this.

The largest static machine ever constructed, with sixteen plates, six feet diameter, did not develop the current a twelve-inch coil does.

Much has been said about the fine fluoroscopic views obtainable from an X-ray tube excited by a static machine, but, no matter how good, fluoroscope views are not often satisfactory; no visible record is retained as by a radiograph, and the doctor who exposes himself often will find himself subject to nervous irritability and complete sterility. It is also a fact that many deep-seated X-ray burns, below the superficial tissues, have been produced by the static machine, these being largely due to the fact that the rays emanating from a tube operated by a static machine, because of the abnormally high voltage, while few, are penetrating, and will affect the deeper tissues before showing any indications on the surface.

YEAST THE BASIS OF NEW SERUM DISCOVERED BY PROF. DEUTSCHMANN.

A REMARKABLE serum, which seems likely to be of great value in the treatment of infectious diseases of all kinds, has been discovered by Prof. R. H. Deutschmann, of Hamburg, an eminent ophthalmist. Prof. Deutschmann's experiments, originally undertaken with a view to discovering a serum for the cure of infectious eye diseases, led him unexpectedly on to a road hitherto untrodden by scientists—that of seeking a serum capable of universal application. The most varied kinds of parasitic infections, either of a purely local nature or those affecting the entire organism, may, his supporters assert, be treated successfully with the serum he has discovered.

Prof. Deutschmann has been enthusiastically supported in his experiments by the directors of the Hamburg hospitals, and particularly by the staff of the Allgemeine Krankenhaus. The Hamburg Hygienic State Institute has also interested itself in the discovery.

The unique feature of the new serum is that, unlike other sera, it does not aim at immunizing the serum nor at generating antitoxins. Its object is merely to serve as a kind of auxiliary supply of energy, reinforcing and strengthening the exhausted tissues in their anti-bacterial campaign. The serum indeed appears to bear a striking resemblance to the "elixir of life" said to have been recently discovered by an English chemist as a cure for cancer.

Prof. Deutschmann's serum rests upon a homely material basis. Yeast is its chief component, this being imparted as food in gradually increasing doses. Prof. Deutschmann's attention was attracted to the use of yeast as a serum through the fact that it had recently been used with great success in cases of tumors, infectious catarrhs, etc. Since it is known not to kill bacteria, Prof. Deutschmann argued that its success as a cure must be due to its effect in increasing the resisting powers of the system. This theory, he said, proved to be correct. The scientist accordingly proceeded systematically to treat animals with yeast on scientific principles, subsequently applying the energizing material thus generated in the animal system for the cure of his human patients. Yeast cannot, it is stated, be imparted direct to the diseased human system, upon which, especially in the case of fever, it reacts disastrously.

Prof. Deutschmann's serum, with which he has been quietly experimenting for the past two years, was first applied in the case of infectious eye diseases, when all hope of remedy by other means had been abandoned. Eyes which would otherwise have necessarily been removed were not only cured, as it seemed miraculously, by the new serum, but regained their normal keenness of sight.

Prof. Deneke, director of the Allgemeine Krankenhaus, subsequently tested the serum in cases of pneumonia with successful results. Dr. Friedlieb, of Homburg v. d. Höhe, applied the serum in cases of croup, etc., rapid recovery following. In individual cases of tuberculosis and even of lupus it has been used with success.

Prof. Deutschmann, however, who is anxious to make no premature boasts concerning the serum, states emphatically that there are many diseases in which his serum will be useless. He adds, nevertheless, that even where it effects no cure the serum is absolutely harmless in its effects, a fact which enormously increases its medical value.

The first announcements regarding the new serum were made in May in the Munich *Medical Review,* up to which time the medical world knew practically nothing of Deutschmann's find. —*N. Y. Times,* Oct. 2, 1907.

Laryngology, Rhinology and Otology

IN CHARGE OF
PERRY G. GOLDSMITH, M.D.
TORONTO.

THE PROBLEM OF ASEPSIS IN THE ROUTINE OFFICE WORK OF THE LARYNGOLOGIST.

Thomas Hubbard (*Laryngoscope,* July, 1907) writes on this rather unusual but important feature of the nose and throat specialist's routine work. The general principles underlying general aseptic work apply with equal force to the surgery of the nose and throat, even if it is not possible to secure as aseptic a field in laryngological and rhinological patients. Hubbard thinks the future will see most of the minor operative work performed in special hospitals rather than in the office, when aseptic facilities are not what they should be. He insists on a clean workshop. A floor covering that will stand daily scrubbing, sanitary plumbing and a fountain cuspidor are points he insists upon. Good ventilation is desirable from the patient's as well as the physician's standpoint. Boiling water alone is sufficient for cleaning instruments. Cutting instruments are boiled after using and then wrapped in gauze and paraffin paper. The cut-off and tubing should be protected by gauze covering. Operator and assistants should use rubber gloves and a gown if occasion demands it. A special paper napkin is used in place of gauze or cotton handkerchief. A steam sterilizer is an absolute necessity in every office. Prior to operation spraying the nasal mucous membrane excites a copious flow of sero-mucus, which in turn flushes the glands and recesses of the mucous membrane effectually. Too firm packing retards this action and is therefore very detrimental to rapid and healthy union. Attention to the condition of the teeth and mouth are important in throat operations. The quality of the air used is considered of very great importance. Dry, cotton-filtered air in a tank, kept as clean as possible by occasional use of vapor antiseptics, should be a feature of every well-ordered office-operating equipment.

The paper is a very timely one and while it may seem somewhat overdrawn in some features, there can be no doubt but that it will stimulate all who read it to pay more attention to their powers in preventive medicine.

NASAL DISEASE: ITS RELATION TO THE TRIFACIAL NERVE.

Dr. C. N. Cox (*Long Island Medical Journal*, July, 1907), after discussing the terminal endings of the three divisions of the fifth nerve, says that irritation of one branch of the nerve can create disease at the seat of distribution of another branch of the same nerve. Neuralgia is instanced as resulting from a septal erosion or sinus involvement, and especially pressure on the septum of an enlarged middle turbinal. Facial neuralgia is said to be a not infrequent result of a suppurating sinus. Ethmoidal disease produces frontal, temporal pain and pain over the bridge of the nose; spheroidal disease, occipital, vertical, frontal and temporal pain. No case of obscure pain about the head or face can be said to have been thoroughly studied unless a careful and special study has been made of the accessory nasal sinuses.

SOME THERAPEUTIC NOTES.

R	Cocaine	gr. xiij
	Chloral Hydralis	gr. viij
	Acid Carbolic	gr. vi
	Aq. Distil	ʒj
	M.	

—*Gleason*

This formula, used as a local anesthetic in nasal work, has the advantage over a plain cocaine mixture, in that it does not rapidly deteriorate, because both carbolic acid and chloral are antiseptics as well as anesthetics. The anesthetic effects in the nose are about equivalent to a 3 per cent. solution of cocaine and appear very rapidly.

R	Antipyrin	gr. x—xxx
	Aquae	ʒj
	M.	

A solution of antipyrin of 2 to 4 per cent., when sprayed upon the mucous membrane of the nose, pharynx or larynx, has the power of contracting the capillaries and of producing an artificial anemia, which effect is maintained for from three to five hours. Solutions of antipyrin may be used with the atomizer in all acute inflammations of the mucous membrane of the upper respiratory tract. When used after the application of cocaine to the interior of the nose, a 4 per cent. solution will maintain the contractile effect of cocaine upon the erectile tissue for several hours. When sprayed upon the nasal mucous membrane without the previous application of cocaine, a 4 per cent. solution gives rise to a smarting sensation, which, however, quickly subsides. Antipyrin solutions of the proper concentration applied to mucous membranes produce analgesia, but not local anesthesia.—(Gleason.)

P. G. G.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

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Editorials.

THE OPHTHALMO REACTION TO TUBERCULIN.

In our November (1907) issue, we drew attention, in an editorial note, to the ophthalmo-reaction to tuberculin, a method of diagnosing tuberculosis introduced to the profession by Dr. Calmette, of the Pasteur Institute, Lille. The test is based on a reaction of the conjunctiva to a strong solution of tuberculin. The dry tuberculin is supplied in small tubes containing such

quantity that ten drops of distilled water give a solution, which is said to be of proper strength for ordinary use and will serve for ten observations. One drop of this solution placed in the lower conjunctival sac is sufficient for the test. It is, of course, necessary to first examine the conjunctiva and see that it is healthy. One eye only is tested, comparison being made between it and the other eye. In general terms it may be stated that, if the person experimented on is not tubercular, no change whatever is observed in the eye; if the person is tubercular the eye speedily becomes red, particularly at the inner part of the conjunctival sac. The subsequent congestion of the eye, variable in extent and intensity, lasts two or three days and is not accompanied with any important general reaction, and, after disappearing, leaves no trace behind.

In France, several well-known physicians—Drs. Letulle, Comby and Grasset—have reported their observations of the test, and the results, which are confirmatory of what has been claimed by Dr. Calmette. Dr. Comby uses a solution one-half as strong as the Calmette solution.

In the *British Medical Journal,* December 7th, 1907, there are two articles on the same subject, one by Dr. MacLennan and the other by Drs. Webster and Kilpatrick, who confirm the observations of the French physicians.

Dr. MacLennan asks, "What is the meaning of the ophthalmo-reaction? Clearly to the eye of the tuberculous it is an irritant; to the eye of the healthy it is bland. Are we to assume from the test, when positive, that there is always present an actual tuberculous lesion, or may we get it, in the absence of a lesion, in those susceptible to the disease? This point can only be settled by prolonged observation and by following the future history of those cases in which the ophthalmo-reaction has been positive. Parallel results are obtained by the cuto-reaction of von Pirquet. The tuberculin proves an irritant to the skin in the same way as to the conjunctiva."

He says, further on: "One would expect that tuberculin instilled into the eye, scratched into the skin, or injected hypodermically, would 'react' only on the healthy; for is not the reaction a sign of tissue resistance, that we would expect to find better developed in the healthy than in the unhealthy? It seems

apparent that tuberculin or some other toxin developed in the tuberculous imparts to the tissues a resistance to tuberculin, as expressed by the inflammation in the eye or skin, that is absent in the healthy. Von Pirquet holds that the reaction is due to the presence of an antibody."

Dr. A. De Martigny gives a report of thirty-one cases in which this test was used in Montreal (*vide Le Journal de Médecine et de Chirurgie*, Montreal, 28 Decembre, 1907). The results were: one doubtful; ten negative; twenty positive. Dr. De Martigny, commenting on the results, says that the ophthalmo-reaction is a valuable method of diagnosing tuberculosis at a stage of that disease when, formerly, a diagnosis used to be difficult to make and was always open to question. As the field of investigation will now be larger, a diagnosis will be possible, even before tubercles are formed, and as soon as bacilli tuberculosis are present in the economy.

It will be interesting to learn whether or no the life insurance companies will direct their medical examiners to try the ophthalmo-reaction test on future applicants for life insurance.

J. J. C.

CROWNED HEADS, BALD HEADS AND DEAD HEADS.

Greater Toronto seems to have awakened during the past two years to a realization of its largeness and its need in the department of hospital accommodation. Since the project of a large hospital on College Street has become the subject of plan and arrangement, the air has been filled with rumors of other hospitals to be erected in the not far distant future. One speaks of a Woman's Hospital. Another tells of a site being looked for upon which the Jews are to build a Jewish Hospital. Still another whispers of the beginning of a Baptist one, by the appointing of a medical teaching staff very soon to McMaster University. And so the ball rolls on. Surely it would seem as if some people were praying for a plague to strike the city, to require so much sick-room space. With pure water, and the Christian Scientists breaking ground for another Temple, and all sorts of housecleaning fads and fancies coming into vogue, ere many moons Toronto ought to be Spotless Town.

After all, the plans of mice and men take time to carry out. A notable example has been the Reorganization Staff of Toronto General Hospital. After fourteen months' cogitation the names of those appointed have been given to the press. The Reorganization Committee grappled long and tirelessly with the very difficult problem before them. That their appointments, on the whole, have been just, may be admitted, with the exception of their treatment of the old Trinity men.

> The arrangement of Toronto General Hospital staff
> Has but resulted in making *some* men laugh.
> Others have been treated in a way that is rough
> Don't you think that their lot is decidedly tough?

A few men have been chosen who meet with the approval of all: hats off to the *Crowned Heads* where the headgear fits. A very few have been appointed who so far have never distinguished themselves in the world of medical science, or even as ordinary practitioners. Perhaps they will make the very best kind of assistants and be willing to be clay in the hands of their seniors, ever at their feet learning, and by sheer hard work win laurels and add their names to the roll of fame. Time will tell. They very wisely have appointed a kindergarten class of those of younger years, on approbation, that is a nervous way to be; almost as bad as being engaged when the dear girl is coy and hard to please, but there isn't a doctor in Toronto who begrudges them their share of the birthday gifts.

But the warmest place in our hearts is ever for the names now on the Consultants' Roll. The men of the Old Brigade who made the Hospital, and who were there by right of the work they did in the old days, before Hospital Boards were composed of god-fathers who made money speak—these men have now been given passes to the *Bald-headed* row. Well, the Bald-headed row is the best place for watching the fun.

Next come the *Dead Heads*—the over-the-age ones who have been told to sing their swan-song—"Grow old with me"—the unappreciated ones, and those who are all right but are just too many—like the old darkey woman's baby. She only knew eight Bible names, and said to the preacher: "This blessed baby can't have no name till one of the others dies; then he'll get hee's name."

Now that the game is over, whether it be worth the candle or not remains to be seen. Let us all unite in a sincere wish for the success of the "Toronto General," that it may be as useful to the community and a greater credit to our city than even in the past, in the good old days so many love to remember.

A question, over the hookah, often lately discussed, has been: What relation will the appointments at the hospital hold in the readjusting of the Medical Teaching Staff of the University of Toronto, which is vaguely spoken of as going to take place in the near future? It is said that the Presbyterian clique are boasting that they are going to have things their own way. That would be indeed monotonous and dreary in the extreme, unworthy of the Board of Governors of a nonsectarian Institution, and also not in the interests of the broader education of the youth of Canada. It is unfortunate that this talk is spreading, and gaining, of course, force and perchance untruthfulness in the telling. As for President Falconer, all we can say is that he appears to be a man, a gentleman, a tireless worker, and broad-minded in the extreme. We will be very much mistaken in the measure we have had opportunity to take of the man if he would stoop to any clique or schism. We all hope for new ideas, great progress and university extension under this Board of Governors. Many will be disappointed if Dr. Falconer, during his *régime* as President, does not make some of the tranquil "Elect" sit up and rub their sleepy eyes in wonder. W. A. Y.

THE NOBEL PRIZES FOR 1907.

The Nobel prizes, of the value of $38,500 each, were awarded on December 10th, 1907. The prize for the "greatest benefaction to mankind by a discovery in medicine in recent years," was awarded to Professor Laveran, of Paris, discoverer of the *hematozoon malariae.*

Charles Louis Alphonse Laveran, who is sixty-two years of age, took his medical degree at Strassburg, in 1867. He was appointed a professor in the army medical school at Val-de-Grâce, Paris, in 1874. In 1875 he published "Hygiene Militaire," a treatise on the diseases and epidemics of armies, which was so

favorably regarded that it was placed by the government in the hands of every medical officer in the French Army. His studies of malaria were principally made at Algiers, where he was stationed. After long and careful researches had been made, he presented to the Académie de Médecine, Paris, November 25th, 1880, a paper, in which he announced the discovery of a new animal micro-parasite in the blood of patients suffering from malarial fever. He also issued several other papers on the same subject, and, in 1884, published a treatise on malarial fevers. The Institute of France conferred on him, in 1889, the Bréant prize for his very important discovery. In 1893 he was elected a member of the Académie de Médecine.

Writing of Laveran's discovery, H. Roger says (*Introduction à l'étude de la médecine,* p. 143): "Among the gymnosporidia, a group close to the coccidea, most naturalists place the malarial parasite, the hematozoon of Laveran, the plasmodium malariæ, the Laverania malariæ, as it has been very properly called abroad."

Plasmodium means a protoplasmic mass made by the fusion of several ameboid bodies, and is considered by many savants as one of the most inappropriate of all the names suggested for the parasite of malaria. A plasmodium undergoes simple division and has many nuclei, while the hematozoon malariæ has but one nucleus and passes through a complicated life-cycle. Why not call it Laverania malariæ, in honor of the winner of the Nobel prize for 1907? The discovery of the cause of malaria will always be identified with Laveran's name, and Laverania malariæ does not involve any discrepancy between the nomenclature and the micro-organism designated. J. J. C.

A LIMERICK-ETTE.

They talk of McMaster Medical School,
Do you think that it would prosper?
Would its halls with students ever be full,
In order the idea to foster?
Wade in, Friend McMaster,
Get some oil from old Rock,
And prove that the scheme
Is not all watered stock.

W. A. Y.

EDITORIAL NOTES

Prevention of Posterior Urethritis.—Dr. Leedham Green (*Indian Lancet,* October 28, 1907) says that the salicylate of sodium, though of comparatively little value in inflammation of the anterior urethra, exerts a beneficial effect in posterior urethritis. Under its influence the urine rapidly clears, and the acute distressing symptoms disappear. This drug has the advantage of rendering the urine markedly acid, a matter of importance; for, by maintaining the acidity of the urine we help in preventing the extension of the inflammation to the bladder and the production of cystitis. The desirability of maintaining the acidity of the urine should also be borne in mind by the attendant, when dieting the patient. A light diet of milk, with the substitution of mineral waters for alcoholic drinks, as is so often recommended, causes a decided and undesirable reduction in the acidity of the urine. Apart from the administration of salicylate of sodium, the treatment must also be directed to combating the prominent symptoms of acute posterior urethritis, vesical tenesmus, terminal hemorrhage, etc. Sedatives, such as belladonna or hyoscyamus, may be given, and the use of the hot sitz bath prescribed. Should the distress be very great, small doses of morphin or heroin may be administered. In a case of vesical tenesmus the common urinary sedative—a mixture of hyoscyamus and liquor-potassii—should not be prescribed; its soothing properties are dearly purchased by the serious reduction in the acidity of the urine. Urotropin and helmitol, though excellent urinary antiseptics for many purposes, have proved to be of little value in the treatment of urethritis. They are almost valueless in the anterior variety, and, though of some service in the posterior form, they seem to be less efficient than salicylate of sodium. If salicylic acid is administered, it is changed into salicylate of sodium by the gastro-intestinal secretions, and, entering the circulation, increases the urinary flow. It appears in the urine as *salicyluric acid.* After large doses of salicylic acid have been taken the color of the urine is changed to a dark olive green. This change in the color of the urine is due to the presence of indican and pyrocatechin, which are produced by the action of the pancreatic juice upon the salicylic acid in the intestine.

A Hypodermic Injection of Atropin Relieves Bronchial Asthma.—G. Zuelzer (*Die Therapie der Gegenwart,* September, 1906) recommends a hypodermic injection of one milligramme (gr. 1-64) of atropin to cut short the asthmatic paroxysm. By this means the emphysema and the resulting dyspnea are promptly relieved. The reason of this, according to this author, is as follows: The emphysema is due to irritation of the vagus, and atropin, as is well known, paralyzes the terminal filaments of that nerve. In support of his theory, he adduces the fact that emphysema may be produced experimentally by electric stimulation of the vagus; if, however, the animal has previously received atropin, no emphysema takes place. He also reports a case of "vagus neurosis," resembling an attack of asthma, except that there was complete absence of rales. Expiratory dyspnea, emphysema with tenderness of the right vagus, and slowing of the heart's action were present. An injection of atropin brought immediate relief.

Kleptomania.—Kleptomania is a morbid desire to steal, which may appear in a person of good social position, in whom such weakness would not be expected to exist. A well-to-do, middle-aged person may steal jewelry, ornaments, trifles from the counters of shops and afterwards secrete them. If discovered and brought before a magistrate a plea of insanity may be raised in her defence. To make the plea valid the defence should be able to prove that the accused did not know that her action was wrongful. Very often the defence is not accepted, and the kleptomaniac is held responsible. In great warehouses valuable goods are exposed to public handling and observation in a very tempting way, and a weak-minded person may be induced to steal them on account of the apparent lack of guardianship of the goods. The warehouseman should be obliged to do his full duty in guarding his property. On the other hand, however, a true kleptomaniac would be likely to steal objects of no interest or value to herself, or would not endeavor to raise money by selling them. Strict enforcement of the laws against theft acts as a deterrent, and magistrates enforce these laws, although their action may expose the relatives of the accused to hardships. A story is told of a lady who, during the reign of Brian Boru, travelled through Ireland, adorned with jewels and bearing in her hand a white wand with a gold ring at the top. So well observed were the

laws that she performed the whole of her journey without being robbed. A similar tale is told of Alfred the Great, and of Robert I., Duke of Normandy, both of whom are said to have kept their dominions in such excellent order that golden bracelets were hung up by the wayside and remained untouched. One would say that kleptomania must have been rare in those countries. Or it may be that the bracelets, being known to the public, could not have been disposed of without the detection of the thief, or that the punishment inflicted for theft was severe and exemplary.

The Opsonic Index in Diseases.—In *Harper's Magazine*, July, 1907, appears an article by Professor R. K. Duncan, University of Kansas, on the opsonic index and the injection of opsonins. After describing the theory of opsonins, and mentioning the successful application of opsonins in acne and furunculosis, he acknowledges that this method of treatment has not been successful in systemic tuberculosis, though it gives a new certainty to the diagnosis of the early stages of that disease. "On every side," he tells us, "it is seen that the attitude of the educated and intelligent part of the medical profession towards the opsonic philosophy is one of waiting, of suspended judgment and extreme respect. Dr. Wright's laboratories in London are crowded with students from every quarter of the civilized world—from Russia and Sweden to India and Japan. American hospitals have been importing his assistants to demonstrate the new treatment. The Toronto General Hospital has already established a department of opsonic inoculation under the direction of Dr. W. G. Ross, one of Dr. Wright's most brilliant disciples. A great American firm of manufacturing chemists has sent over a member of its staff to study under Dr. Wright, so that, as soon as the opsonic treatment becomes general it may be in a position to supply physicians with the dead microbes as inoculating materials. Hospitals and schools that claim to be up-to-date can hardly afford to ignore this seemingly valuable branch of research work."

Test of the Purity of Chloroform.—Chloroform decomposes under the influence of moisture and light, the chief product formed being hydrochloric acid. A solution of silver nitrate is ordinarily used to detect the acid. Congo red becomes blue in the presence of free HCl, and it is used as a test for this acid in

chemical investigations of the gastric juice. Some months ago a writer in the *Lancet* suggested that Congo red should be used to indicate the presence of HCl in chloroform. If a small cylinder of elder pith, or some similar substance, be dyed with a solution of Congo red in absolute alcohol, and put into the bottle containing the chloroform, it answers the purpose of a test for HCl. If the chloroform is pure, the pith will remain of a bright red color: but if deterioration has taken place, sufficient to render the use of the chloroform dangerous, the pith will be almost instantly changed to a bright blue. The little piece of pith can be used over and over again, as long as it remains bright red. If the chloroform has spoiled or become old it can be freed from its impurities by shaking it with a solution of caustic soda.

Test of the Purity of Hydrogen Peroxide.—Hydrogen peroxide, H_2O_2, is an unstable liquid, which readily yields up an atom of oxygen, and hence is a powerful oxydizer. It is strongly antiseptic, and is very much used by surgeons and dentists as an antiseptic application to inflamed mucous membranes and as a cleansing agent in the treatment of abscesses. It is also used locally by physicians in diphtheria, scarlatina, gonorrhea, etc. For external use this drug may be gargled, sprayed, or applied with a syringe or a swab, either in full strength or diluted with water. Having had occasion recently to wash out an abscess with a solution of hydrogen peroxide (1:4), the patient complained that the solution smarted. Subsequent examination of some hydrogen peroxide from the same bottle showed that it contained free HCl. The manufacturer of this preparation explained that a certain amount of free hydrochloric acid was necessary in a solution of hydrogen peroxide, as the solution itself had a strong tendency to deteriorate with age, by exposure to heat, or from protracted agitation. Obviously, then, a preparation of hydrogen peroxide should be fresh, and, before using it, the surgeon should test it for HCl.

The Bar-Room a Great Leveller.—The bar-room levels many class distinctions, and may be pronounced to be a leading democratic institution. Repeatedly have we seen well-dressed gentlemen saunter into a bar-room behind some tradesman or laborer dressed in soiled working clothes. Such propinquity bespeaks a

common taste and a condition of mind sufficiently insistent to silence the scruples of the rich man and open wide the lean purse of the poor one. The well-dressed man wants the stimulus of a glass of whiskey to brighten his mental horizon; the working man wants it to soothe his tired muscles. Varying psychical and physical needs attract them to the bar-room, where through the influence of the great leveller rich and poor meet for a time on a level. Looked at from a medical standpoint, the bar-room is a great leveller of health. Dr. Osler counts whiskey one of the three "bads" that cause tuberculosis: bad air, bad food, and bad whiskey. Dr. J. A. Rivière (*Annales de Thérapie,* Paris) says that alcoholism is one of the great causes of phthisis, especially the pneumonic and fibroid forms of that disease. The permanent disorder, which alcoholic intoxication causes in the nutritive changes of the body, the gradual infection of the blood and the most essential humors, the lesions of the nobler tissues and the fatal loss of organic resistance to disease fully explain how tubercular invasion is produced in many cases. J. J. C.

ANOTHER LIMERICK-ETTE.

On Spruce Street there once was a medical school;
Of worthy professors it was undoubtedly full.
It no longer liveth, as it bartered its soul,
And to 'Varsity now plays a second-class role.

W. A. Y.

News of the Month.

THE ONTARIO MEDICAL ASSOCIATION.

The 28th annual meeting of the Ontario Medical Association will be held in Hamilton, under the presidency of Dr. Ingersoll Olmsted, on the 26th, 27th, and 28th of May next.

The addresses in Medicine and Surgery will be delivered by Dr. Charles Stockton and Dr. Charles Scudder, respectively. The former, who is well known to us as the American editor of Nothnagel's work on the Diseases of the Stomach, is Professor of the Principles and Practice of Medicine in the University of Buffalo. The latter is Surgeon to the Massachusetts General Hospital, and has distinguished himself as the author of a work upon Fractures which has been received with so much favor that six editions have appeared within eight years.

The Vice-Presidents, with the chairmen of the committees on Papers and Business and on Arrangements, Drs. R. R. Wallace and A. B. Osborne, met at the home of the President, Dr. Olmsted, in Hamilton, December 15th last, to inaugurate the work for the year.

Dr. Olmsted reported a personal canvass of several portions of the province to stimulate an interest in the coming meeting.

The chairmen of the two local committees have active campaigns on the way, looking to a successful year's work. If the Hamilton members are supported by the men in the province with an earnestness in any degree approaching that with which they have thrown themselves into the work, the next meeting is already an assured success.

The Association decided at its last meeting to stimulate a wider and more sympathetic interest among the practitioners of the province in its work, and one of the steps to that end was to carry the meeting of 1908 away from Toronto, where it has been called for so many years. The movement seems a wise one, and its success depends solely upon the efforts of the individual members scattered everywhere in Ontario. One or two men in each county who will interest themselves sufficiently to occasionally call the attention of their fellows to the Hamilton meeting, with its promise of a good time both intellectually and socially, can give us the best year, in point of numbers, yet. Five hundred active

members would be less than twenty per cent. of the physicians of the province, and surely not too large a number to have in annual attendance, for the western half of the province could send as many, and a successful meeting this year will insure a repetition in a different section.

The profession generally is invited to attend. Any regular practitioner of medicine in good standing may become a member. Come and help make the Hamilton meeting a success. The annual fee is but two dollars.

TORONTO'S BIRTH RATE LAST YEAR WAS 6,715.

The births in Toronto in 1907 totalled 6,715, as against 5,985 in 1906, and 5,816 in 1905. There were 3,635 marriages last year, as against 3,108 the previous year, and 3,060 in 1905. The deaths in 1907 numbered 4,563; in 1906, 3,960; and in 1905, 3,915.

The deaths from contagious diseases in 1907 were as follows: Tuberculosis, 279; diphtheria, 89; typhoid fever, 58; scarlet fever, 45; measles, 36; whooping cough, 35.

In 1906 the deaths were: Tuberculosis, 279; typhoid, 67; diphtheria, 42; scarlet fever, 12; measles, 11; whooping cough, 11.

There were 560 births in the city last December, as against 541 the previous month, and 409 in December, 1906. The marriages last December totalled 231, as against 392 in November, and 281 in December, 1906. There were 371 deaths last December, 359 in the previous month, and 344 in December, 1906.

LAKEHURST SANITARIUM, OAKVILLE.

That a modern medical institution, affording unsurpassed facilities for the treatment of alcoholism and drug addictions, such as the Lakehurst Sanitarium, Oakville, is appreciated by the medical profession, is apparent by the fact that a large number of its patients are sent by physicians, who are aware of the splendid results that this institution has obtained during the past fourteen years.

Lakehurst Sanitarium is neither a hospital nor an asylum. It is rather a private hotel or health resort, situated in one of the most beautiful grounds on the north shore of Lake Ontario. The grounds are extensive and laid out with lawns, terraces and shaded walks. In summer a lawn-tennis court and bowling green are

kept in good order for those who care to participate in these pastimes, while boating, bathing and fishing may be indulged in by the patients. In the house the men can have the use of the billiard table, and the smoking-room is provided with all things necessary to make it a pleasant lounging place.

Every patient comes under the direct care of the physician-in-charge, Dr. John Urquhart. The "habit" that has weakened the will power yields to well-directed scientific treatment. In addition, the improvement in the general health of the patient is very noted.

The institution is founded on the recognized fact that alcoholism is a disease, and a curable one. The essentials for cure, such as rest, complete change, and special treatment, are hardly possible, except in an institution devoted to the one purpose. For particulars, address, Manager, Lakehurst Sanitarium, Oakville, Ont.

THE NEW STAFF OF TORONTO GENERAL HOSPITAL.

The following is the complete report of the special committee of the Board of Trustees of the Toronto General Hospital, as passed by the Board of Trustees on January 15th:

The committee recommended that, in addition to the head of each department there shall be a senior assistant, or assistants, and clinical assistants, and that the following gentlemen be appointed to the positions specified:

Surgery—Service in charge of Dr. George A Bingham. Senior assistant, Dr. Charles Shuttleworth; clinical assistants, Drs. Wallace Scott and Arthur B. Wright. Service in charge of Dr. Alex. Primrose. Senior assistant, Dr. F. N. G. Starr; clinical assistants, Drs. Stanley Ryerson and Samuel Westman. It is recommended that Dr. Clarence L. Starr be given the standing of senior assistant and attached to Dr. Primrose's service for the purpose of being available as an assistant for Mr. I. H. Cameron, the senior professor in surgery in the University of Toronto. Service in charge of Dr. Herbert A. Bruce. Senior assistant, Dr. W. J. O. Malloch; clinical assistants, Drs. Warner Jones, John McCollum and A. A. Beatty.

Medicine—Service in charge of Dr. Alex. McPhedran. Senior assistant, Dr. A. E. Gordon; clinical assistant, Dr. Wm. Goldie. In charge of tuberculosis clinic, under Dr. McPhedran's service, Dr. Harold C. Parsons. Service in charge of Dr. W. P. Caven. First senior assistant, Dr. John Fotheringham; second senior assistant, Dr. W. B. Thistle; clinical assistants, Drs. E. C. Burson and Joseph S. Graham. In charge of the department for the treatment of functional neuroses under Dr. Caven's service, Dr.

D. Campbell Meyers. Service in charge of Dr. Graham Chambers. Senior assistant, Dr. R. D. Rudolf; clinical assistants, Drs. Goldwin Howland and Geo. W. Ross; clinical assistant in dermatology, Dr. D. King Smith.

Gynecology—Service in charge of Dr. James F. W. Ross. Senior assistant, Dr. Frederick Marlow; clinical assistants, Drs. R. W. B. Hendry, A. C. Hendrick, Ida E. Lynd and Helen MacMurchy.

Obstetrics—Service in charge of Dr. Kennedy McIlwraith. Senior assistant, Dr. Frederick Fenton; clinical assistant, Dr. J. A. Kinnear.

Eye department—Service in charge of Dr. R. A. Reeve. Senior assistants (of equal rank), Dr. Charles Trow, J. M. MacCallum and D. N. Maclennan; clinical assistants, Drs. Colin Campbell and W. H. Lowry.

Ear, Nose and Throat department—Service in charge of Dr. Geo. McDonagh. Senior assistants (of equal rank), Drs. D. J. G. Wishart, Geoffrey Boyd and Perry Goldsmith; clinical assistants, Drs. C. M. Stewart and Gilbert Royce.

Department of Anesthetics—Dr. Samuel Johnston in charge. Assistant, Dr. Duncan Anderson.

Electrical department—Dr. Charles R. Dickson in charge. Assistant, Dr. George Balmer.

The committee recommended that all appointments lower than that of senior assistant should be probationary, and subject to special review before the annual appointments are made: also, that in observance of the provisions of the Burnside Trust agreement, Drs. J. A. Temple and F. LeM. Grasett be appointed life members of the active staff without service.

The committee recommended that the following be added to the consulting staff:

Medicine—Drs. John L. Davison, T. F. McMahon, W. H. B. Aikins, Allen Baines and John Caven.

Surgery—Drs. Luke Teskey, R. B. Nevitt and N. A. Powell.

Obstetrics—Dr. Adam H. Wright.

Eye and Ear department—Drs. G. Sterling Ryerson and G. H. Burnham.

In presenting its final report the committee recorded its appreciation of the excellent character of the service rendered by the staff, past and present, and expressed its grateful acknowledgment of the self-sacrificing efforts in the interests of the sick, and of medical education, on the part of members retiring, several of whom had been connected with the hospital for long periods, and had requested to be relieved from further duty. It was recommended that the committee be continued in existence for the purpose of assisting in bringing into effect the regulations adopted by the board in connection with the establishment of the new services.

MEDICAL LABORATORIES OPENED AT QUEEN'S.

The new Medical Laboratory building of Queen's University was dedicated on January 14th. The ceremonies were held in the old Convocation Hall, and there were present for the event Hon. Dr. Pyne, Minister of Education for Ontario; Dr. Barker, of Johns Hopkins University, Baltimore; Dean Reeve and Professor A. B. Macallum, of Toronto University, and Drs. Wesley Mills and Adami, of McGill. There was a large audience in attendance. After an invocation prayer by Rev. Dr. MacGillivray, Principal Gordon stated that Queen's throughout all her borders rejoiced to-day with the medical faculty over the completion of the Medical Laboratory building, one of the most beautiful as well as commodious on the campus. The Ontario Government, he said, had indeed proved itself to be a "liberal" Conservative Government by making a grant of $50,000 to enable Queen's to do further work in the way of medical research and for the public health. The presence of representatives from Toronto and McGill Medical Colleges, he said, implied that the three universities were on terms of cordiality, which should ever be.

Dean Connell made a statement regarding the history of Queen's Medical College, which was established in 1854, and amid an imposing stillness he called the roll of the departed members of the medical profession of Kingston by whose self-sacrifice and devotion Queen's Medical School was able to exist. These were John R. Dickson, John Stewart, Horatio Yates, Octavius Yates, M. Lavella, Thomas R. Dupuis, C. A. Irwin, A. S. Oliver, W. H. Henderson, H. J. Saunders, K. N. Fenwick, Fife Fowler and John Herald. The dean commended the Ontario Government for its wisdom in adopting the principle of state aid for medical education. In the new building would be accommodated biology, physiology, histology, pathology and bacteriology. There will also be rooms for public health work, which has grown in a few years to be a considerable tax upon Queen's resources. During the past year 1,505 examinations have been made free of expense to the public, and the specimens have come all the way from Fort William to Ottawa.

Dr. Barker, who succeeded Professor William Osler in Johns Hopkins, delivered an admirable address upon medical laboratories and their relation to medical research and discovery, and emphasized the fact that Canada owed a duty to science by seeing that its brightest medical students were given encouragement to take up research work for the benefit of generations to come.

The Minister of Education congratulated the medical faculty

on its fine new building. He scarcely knew how they had managed to erect such a magnificent stone edifice for under $50,000. He would inform Premier Whitney that he had never seen $50,000 so well expended. He assured Queen's medical faculty that it would in future have the sympathy of the Government.

Short addresses were made by Dean Reeve and Professor Macallum, of Toronto University, and by Drs. Adami and Mills, of McGill, congratulating Queen's on its advance and the work it was doing for medical science.

CANADIAN HOSPITAL ASSOCIATION.

At a meeting of the Executive of the Canadian Hospital Association at the Hospital for Sick Children, it was decided to hold the next meeting of the Association in Toronto, in the Parliament Buildings (if the rooms can be obtained), on Easter Monday and the following Tuesday, 1908. The meeting will open at 2 o'clock on Monday; the Tuesday sessions will be held at 9.30 a.m. and 2 p.m.

A reception will be given by the President, Miss Louisa Brent, in the new Nurses' Home of the Children's Hospital, on Easter Monday evening at 8 p.m.

Dr. S. S. Goldwater, Superintendent of the Mount Sinai Hospital, New York, and President of the American Hospital Association; Dr. C. K. Clarke, Superintendent of the Toronto Hospital for Insane; Del. T. Sutton, Esq., editor of the *National Hospital Record,* Detroit; Dr. W. J. Dobbie, Superintendent of the Toronto Free Hospital for Consumptives, and Henry M. Hurd, Esq., Superintendent of the Johns Hopkins Hospital, Baltimore, have promised to give papers. A number of the Canadian superintendents have also been invited to contribute to the programme.

THE SECTION OF STATE MEDICINE.

The Academy of Medicine is now well organized, and a good deal has been done to justify its existence and prove its success. Three sections are now hard at work and a fourth has just been added, namely, the section of State Medicine. The constitution and by-laws providing for the formation of a new section having been complied with, a meeting for organization was called for Monday, January 20th, in the Academy building, at which the following officers were elected: Chairman—Dr. Amyot; Secretary—Dr.

W. L. T. Addison, 431 Broadview Avenue; Editor—Dr. J. F. Goodchild, 33 Bloor St E. These gentlemen were also empowered to arrange a programme, fix stated times for meeting, and frame by-laws for the section, to be reported at the first meeting to be held as soon as possible.

The sections certainly have plenty of work cut out for them. The water situation in Toronto, the milk supply, the smoke problem, the vaccination question, the cleaning and ventilation of railway carriages, and the medical inspection of schools are amongst the subjects already suggested. Besides the above-named officers, the following Fellows of the Academy have signified their intention of joining the section: Dr. McPhedran, Dr. F. N. G. Starr, Dr. Chas. Hodgetts, Dr. R. A. Reeve, Professor Oldright, Dr. C. J. C. O. Hastings, Dr. Herbert Hamilton, Dr. A. A. Macdonald, Dr. W. F. Bryans, Dr. J. J. McKenzie, and others.

H. M'M.

Summer in Winter.—Persons wishing to escape the rigors of our Canadian winter will get copious information concerning the attractions of that "summer isle of Eden," Bermuda, the scene of Shakespeare's "Tempest," by writing to F. Withrow, B.A., Toronto, whose ad. appears elsewhere.

The Canadian Medical Exchange in charge of Dr. Hamill wishes us to announce that interim offers of medical practices for sale are to be found under "Business Chances," of either the Toronto *Globe* or *Mail and Empire,* each Saturday. As this journal is only issued once a month, many practices pass through his hands which are never advertised in our columns, although a full list of his offers, as they appear on his register as we go to press, will be found as heretofore among our advertising pages. His Medical Exchange offers a short-cut for buyers and sellers to secure the end desired.

Training in Medical Organization.—The students of the University of Pennsylvania Medical School have formed an organization the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modelled. The various student societies take the place of the State organizations and elect members to a House of Delegates, which transacts all the business of the Association. An annual meeting is held at which papers are read by chosen members, thus encouraging original research and a scientific spirit. The organization is named The Undergraduate Medical Association of the University of Pennsylvania, and already has over two hundred and fifty members.

The Physician's Library.

BOOK REVIEWS.

Trypanosomes and Trypanosomiases. By A. Laveran, Membre de l'Institut et de l'Académie de Médecine, Paris, and F. Mesnil, Chef de Laboratoire a l'Institut Pasteur. Translated and much enlarged by David Nebarrs, M.D., B.Sc., D.P.H., (Lond.), Member of the Royal College of Physicians, London; Scientific Assistant in Pathology at the University of London; Royal Society Commissioner for the Study of Sleeping Sickness in Uganda, 1903. With colored plate and eighty-one figures in the text. London: Baillière, Tindall and Cox, 8 Henrietta Street, Covent Garden. 1907. (All rights reserved.) Canadian agents: J. A. Carveth & Co., Ltd., 434 Yonge St., Toronto.

This rather extensive work on a comparatively new subject requires no apology when we consider that only as far back as 1892 we were able to give a résumé of our knowledge of trypanosomes within the compass of a short article in a medical journal. Only one pathogenic species had been described, namely, that which produces the disease known as Surra in India, while to-day it requires a large volume of over 500 pages to relate all that is known of these hematozoa and the diseases to which they give rise.

Now, all practitioners may be called upon to diagnose trial cases of trypanosomiases even away from their endemic areas, as the means of rapid transport, and the growing facilities for ocean travel undoubtedly spread the human trypanosomiases, of which a number have been observed among Europeans. Three years have now elapsed since the publication of Professors Laveran and Mesnil's "Trypanosomes et Trypanosomiases." When the work appeared it contained all that was known about the subject at the time, but subsequent investigators have done a great deal of work in this particular branch of pathology, consequently the author has not only translated their original book, but has made considerable additions to practically every chapter, bringing it thoroughly up-to-date. All such additions are enclosed in square brackets. Among the most important of these we find recent observations on the spirochetes; the Leishman-Donovan body; the occurrence of flagellates in tsetse-flies, mosquitoes, leeches, etc.; the microscopic changes found in the central nervous system in sleeping sickness and in dourine. Also a new chapter has been

written on the "Treatment of the Trypanosomiases." This book is the only complete work on this very fascinating and important subject, incorporating, as it does, all the latest information relating thereto. By the use of a larger page, and a closer type for a portion of the added matter, the book is not cumbersome, and it is a masterpiece of the publishers' art. W. H. P.

The American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, M.D., editor "The American Illustrated Medical Dictionary." Fifth revised edition. 32mo of 574 pages. Philadelphia and London: W. B. Saunders Company. 1906.

This is an excessively useful book and contains a great deal that is of value. It has been worked up with a great deal of care, and should be on the table of every medical man. In the present day, when so many new names are appearing, no one can read an article in a medical journal without feeling that at any moment he may come across a word that does not convey perhaps its full meaning to his mind. With this book in reach, many men would find much more comfort both in reading and writing medical articles than they would if they had to depend upon their classical knowledge to suggest to their mind the meaning of some of the words in comparatively common use. A. J. J.

The Operating Room and the Patient. By Russell S. Fowler, M.D., Professor of Surgery, Brooklyn Postgraduate Medical School, Brooklyn, New York. Second Edition, Enlarged. Octavo volume of 284 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $2.00 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

This book during the past six months has been in daily use in the operating suite of the Toronto General Hospital for reference by the nurses and internes, and has been found to contain many useful and practical hints. We find its arrangement quite complete in detail, touching in the main on all issues which may come up in the operating room. We would call attention particularly to the illustrations, both of operating rooms and of patients in positions, which give very concise ideas on those points, and to the chapters on instrument and supply room, which contain many points that are too frequently overlooked

Third Annual Report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis. February 1, 1905, to February 1, 1906. An account of the work of the third year, a continuation of the report on the Maragliano Serum Treatment, a statistical study of the influence of the Henry Phipps

Institute on the death-rate from tuberculosis in Philadelphia, and a report of some of the scientific work done by members of the staff of the institute during the year. Edited by Joseph Walsh, A.M., M.D. Published by the Henry Phipps Institute, 238 Pine Street, Philadelphia. 1907.

On Treatment. By Harry Campbell, M.D., B.S., F.R.C.P., Physician to the Northwest London Hospital and to the Hospital for Diseases of the Nervous System, Welbeck Street. Pages 416. Cloth. Price, $1.50. London: Baillière, Tindall & Cox, 8 Henrietta St., Covent Garden. Canadian agents: J. A. Carveth & Co., Toronto.

In this work the author gives us an essentially logical method of treatment. He deals with the subject in a general way, embracing many useful hints and suggestions which are unfortunately not mentioned in the standard medical works or in our medical schools. It is a book full of common-sense suggestions which are of inestimable value to the student and practitioner.

E. C. B.

Rontgen Rays and Electro-Therapeutics, with Chapters on Radium and Phototherapy. By Mihran Krikor Kassabian, M.D., Director of the Röntgen Ray Laboratory, and Instructor in Electro-Therapeutics in Medico-Chirurgical Hospital and College; Member of the Philadelphia County Medical Society, Pennsylvania State Medical Society, American Medical Association, American Röntgen Ray Society; Vice-President of the American Physico-Electro-Therapeutic Society, New York Medico-Legal Society, etc., etc. Philadelphia and London: J. B. Lippincott Company. Pp. xxxii.-545. Illustrations 245.

This work, which is one of Lippincott's New Medical Series, possesses many features which should recommend it to the busy practitioner who desires to familiarize himself with recent advances in Electro-Therapy and the uses of the Röntgen Ray. For instance, an enormous amount of most valuable material is condensed between its covers, and this matter so arranged as to be very readily available. Then again, authorities are freely quoted, a point of much importance to those unfamiliar with the subject. Also, the illustrations are exceptionally instructive and clear, as well as unstinted in number, and the diagrammatic ones most helpful in the elucidation of the text. For its comprehensive and comprehensible description of apparatus, and its attention to the important subject of technique, this work is especially to be commended; but the book possesses so many features of value that it is difficult to say which is its strongest point, except, perhaps, that, as might have been expected, owing to the pre-eminence of the

author in this particular field, the department devoted to Röntgenography may be regarded as leaving little to be desired. This is made possible by allotting almost one-half of the volume to its consideration. Phototherapy, a most important subject, unfortunately receives little attention, possibly because it is a comparatively recent claimant for therapeutic favor. For those unfamiliar with the progress of the branches of physiotherapy to which this volume is devoted, a perusal of its contents must prove somewhat of a surprise and revelation, and to such, if any there be in this enlightened age, it should be most helpful and suggestive. C. R. D.

Text-Book of Diseases of the Skin. By Arthur Van Harlingen, Ph.B. (Yale), M.D., Emeritus Professor of Dermatology in the Philadelphia Polyclinic, Dermatologist to the Children's Hospital, etc. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

This book is now in its fourth edition, which shows how highly it has been appreciated by the profession.

The work should prove very useful to the student, as the various diseases are dealt with in a concise manner, and many of the rare diseases are left out, and stress is laid upon the commoner affections. The book is exceedingly well illustrated, many of the plates being exceptionally good. D. K. S.

Merck's 1907 *Index.* (Third edition.) An Encyclopedia for the Chemist, Pharmacist, and Physician, stating the names and synonyms, source or origin, chemical nature and formulas, physical form, appearance and properties, melting and boiling points, solubilities, specific gravities and methods of testing, physiological effects, therapeutic uses, modes of administration and application, ordinary and maximum doses, incompatibles, antidotes, special cautions, hints on keeping and handling, etc., of the chemicals and drugs used in chemistry, medicine and the arts. 472 pages. Bound in cloth.

Primarily Merck's 1907 Index is published for distribution in the United States, but, owing to numerous requests, a number of copies have been set aside for sale in other English-speaking countries. So long as these reserved copies last, the publishers, Merck & Co., University Place, New York, U.S.A., will send the book to any chemist, physician or wholesale druggist upon receipt of three shillings and six-pence, or eighty-five cents.

The general scope and character of this book are made sufficiently plain in the sub-title. It is a Chemical Encyclopedia. But, whereas Beilstein takes in all possible chemical combinations, Merck's 1907 Index limits itself to the chemicals and drugs actu-

ally on the market, giving in regard to them information comparable to Beilstein's.

To those who have had previous editions, Merck's Index has become almost indispensable. This latest edition is bound to make many new friends, improved as it is by the addition of the newest products of the chemical industry, by the adoption of the latest nomenclature, and by the adherence to the most modern authorities.

Bulletin of the Ontario Hospitals for the Insane. Vol. I., October, 1907. Rockwood Hospital number. A Journal Devoted to the Interests of Psychiatry in Ontario. Printed by order of the Legislative Assembly. Editors of the present number: Edmund Ryan, M.D., W. C. Barber, M.D., W. C. Herriman, M.B., W F. Connell, M.D., W. Gibson, M.D., Rockwood Hospital, Kingston.

The editors deserve credit for their successful effort in bringing to the notice of the profession many important matters concerning the treatment of insanity. Among others, we notice views expressed on the prophylaxis of insanity, and on home treatment in incipient mental disease. A description of the continuous bath with an illustration, is also given, and we learn that this method of treatment is successfully employed in toxic forms of insanity.

A list of seventy-eight autopsies of persons who had been insane is given. Rarely have we read a summary of anatomical findings more instructive.

To those who love to delve into the remote causes of disease, the chapter on the Diphtheroid bacillus, Bacillus paralyticans, considered as a causative factor of general paresis, will give food for thought. It is valuable as research work, and the author deserves to be complimented on an effort all too rare in Canada. It would be worth while to test the nasal mucosæ of ordinary healthy people in Canada, in search of the Diphtheroid bacilli. J. J. C.

Proceedings of the Royal Society of Medicine. Vol. I., No. 1, November, 1907. Longmans, Green & Co., 39 Paternoster Row, London: New York, Calcutta, Bombay. 1907. Price, 7s. 6d.

We received with a great deal of pleasure recently Vol. I., No. 1, of "The Proceedings of the Royal Society of Medicine." This seems to us to be pretty nearly the *crême de la crême* of English medical literature. It is divided into the following sections, viz., Clinical, Dermatological, Electro-therapeutical, Epidemiological, Medical, Neurological, Obstetrical and Gynecological, Odontological, Pathological, Surgical and Therapeutical-Pharmacological. The sections are arranged alphabetically and are in-

dependently paged. Each monthly number will be published on the last day of the month from November to July, inclusive. Needless to say, the first volume consists of the cream of medical knowledge, and includes the presidential addresses of each section, by such well-known authors as Sir Thos. Barlow, Drs. H. Radcliffe Crocker, W. Deane Butcher, A. Newsholme, Sam. J. Gee, J. Howard Mummery, S. G. Shattuck, and T. E. Buxton Brown.

The Proceedings of the Royal Society of Medicine will be well worthy of preservation, and the expenditure of 7s. 6d. per volume is more than justified.

We must criticise, however, the publishers for offering the Proceedings for sale "to the Public." We think this is decidedly unwise.

Report Relating to the Registration of Births, Marriages and Deaths in the Province of Ontario, for the year ending 31st December, 1905 (Being the 36th Annual Report). Printed by order of the Legislative Assembly of Ontario. Toronto: Printed and Published by L. K. Cameron, Printer to the King's Most Excellent Majesty.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; Jas. Stewart, M.D., Montreal; J. B. Murphy, Chicago; A. McPhedran, M.D., Toronto; Thos. M. Rotch, M.D., Boston; John. G. Clark, M.D., Philadelphia; Jas. G. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume IV., Seventeenth Series, 1907. Philadelphia and London: J. B. Lippincott Co. 1907.

We find among the contributors to the last volume of "International Clinics" for 1907 such men as Professor Alexander McPhedran, of the University of Toronto; Dr. E. M. Corner, F.R.C.S. of Great Ormond Street Hospital, London, Eng.; Prof. G. Olmette, of Lille, France; Dr. Alfred Gordon, of Jefferson Medical College; Dr. Guthrie McConnell, of St. Louis, Mo.;

Dr. John Norman Henry, Clinical Professor of Medicine, Woman's Medical College, of Pennsylvania; Mr. A. H. Tubby, F.R.C.S., London, Eng.; Dr. J. W. Wainwright, of New York; Dr. Purves Stewart, of Westminster Hospital, London, Eng., and a number of other well-known men. Volume IV. consists of about thirty lectures on Treatment, Medicine, Surgery, Gynecology, Genito-urinary Diseases, Orthopedics, Neurology and Otology.

One of the best lectures in the volume is that by our collaborateur, Dr. Alex. McPhedran, of Toronto. It consists of an article about fifteen pages in length and is entitled "The Urgency of Early Diagnosis of Cancer of the Stomach," having been read at the meeting of the Medical Association of Central New York, at Rochester, last October. The author impresses his readers with the vast importance of an early recognition of cancerous disease of the stomach "as the first step essential to its cure." Dr. McPhedran says: "If we recognize the existence of cancer in the stomach, bowel, gall bladder, omentum, etc., while still local, and before infection extends beyond the original seat of disease, the first and by far the most difficult step is taken towards the cure, to complete which it is only necessary to do the mechanical part—a mechanical part we should see is undertaken only by the capable expert." The lecture is most instructive and well worthy of careful perusal.

A short chapter that interested us, too, was that by Dr. Purves Stewart on "The Disorders of Sleep," as also a contribution by Dr. M. Lermoyez, entitled "Thiosinamine in the Treatment of Deafness." W. A. Y.

Atlas and Text-Book of Human Anatomy. Volume III., completing the work. By Prof. J. Sobotta, of Wurzburg. Edited, with additions, by J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy at the University of Toronto, Canada. Quarto of 342 pages, containing 297 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $6.00 net; half morocco, $7.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

Volume Three of this excellent atlas completes the work. We have already had the opportunity of saying that the author has every reason to feel satisfied with the result of his labors. Sobotta's Atlas and Text-Book of Human Anatomy will for years be looked upon as one of the best works on the subject in print. Volume Three includes the remainder of the vascular system and the entire nervous system, together with the organs of special sense. The author has very wisely placed himself in the position

of the student, and has arranged his work in a similar manner to that found in the dissection of the cadaver. "This arrangement of the material has the advantage that the student using the atlas in the dissecting room can find upon a single page the great majority of the structures found in a layer of his dissection, and is not forced to hunt through the volume and waste much time in unnecessary search." The colored illustrations found all through the volume could not be improved upon, and so true are they to life that a careful study of the atlas would give the student almost as correct a knowledge of the anatomy of the human body as if he had spent months in the dissecting room. W. A. Y.

The Principles and Practice of Dermatology. Designed for Students and Practitioners. By William Allen Pusey, A.M., M.D., Professor of Dermatology in the University of Illinois; Dermatologist to St. Luke's and Cook County Hospitals, Chicago; Member of the American Dermatological Association. New York and London: D. Appleton & Co.

In the title of this work the author states it is designed for students and practitioners, and he has fully carried out this idea; nevertheless the book is also of great service to those who devote much of their time to Dermatology. William Allen Pusey is a recognized authority, on this continent, in the use of the X-rays, and if for no other reason than the opinion of the author in the use of the rays in skin diseases, the work would prove necessary to all who use the X-ray as a therapeutic agent.

Throughout the author deals with the various diseases in a most clear manner, going into the pathology thoroughly. The treatment is taken up fully, and in such a practical manner that it is well adapted for the needs of students.

The book is pleasantly written, and forms, as a whole, a textbook which can be highly recommended. D. K. S.

A Handbook of Suggestive Therapeutics, Applied Hypnotism, Psychic Science. By Henry S. Munro, M.D., Americus Georgia. Illustrated. St. Louis, Mo.: C. V. Mosby Medical Book & Publishing Co. 1907.

This is certainly an interesting book and worthy of careful reading. That there is value in Suggestive Therapeutics there is little question. Many a case has been assisted towards recovery by this means, without leaving the medical practitioner open to be charged as tending towards Christian Science—far from it. The author, in his book, gives facts in his "personal experience and clinical evidence as well to prove the value of Suggestive Therapeutics in the practice of medicine, with a detailed explanation how to apply suggestion efficaciously, both with and without

hypnotism as a therapeutic adjunct." The book is written, not for neurologists, but for the general practitioner who may not have given as much thought and consideration to the subject as it deserved. W. A. Y.

Medical Diagnosis. A Manual for Students and Practitioners. By Charles Lyman Greene, M.D., Professor of the Theory and Practice of Medicine in the University of Minnesota; Attending Physician St. Luke's Hospital, the City Hospital and the St. Paul Free Dispensary, etc., etc. Second edition, revised. With 7 colored plates and 241 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1907.

It is just about a year since we received the first edition of Dr. Greene's book, so that it must be flattering to him that he had so soon to publish a second.

The book is of the type that a busy man will frequently take up and read, being a handy size, concise and withal practical. There is many a time that a physician does not care to refer to a system, but prefers to consult—in more or less of a hurry, perhaps—a book that will give him in a short space the most succinct points regarding his case, especially as to diagnosis. This is just the kind of a book that Dr. Greene has given the profession.

W. A. Y.

A Text-Book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., LL.D., Professor of Physiology in the Johns Hopkins University, Baltimore. Philadelphia and London: W. B. Saunders & Co.

The second edition of this work, following so closely on the first, is sufficient guarantee as to its efficiency and popularity. Dr. Howell's name in the medical world as a physiologist, thinker and writer needs no word from us. The beauty of this work is its lucidity, the ease with which knotty points are explained, and the care with which useless bibliography is expunged, giving us only his own carefully digested opinions, based on many experiments and laboratory work. He says in the introduction, in speaking of the marvellous advance in physical chemistry:

"Amid the conflicting results of this literature, it is difficult or impossible to follow the true trend of development. The best that the text-book can hope to accomplish in such cases is to give as clear a picture as possible of the tendencies of the times."

This assertion we find carefully carried out. We can heartily recommend the work to the student, whether under- or post-graduate. The publisher's work is that of a quality usually found in all Saunders' publications—excellent. A. B.

Compend of Surgery for Students and Physicians, including Minor Surgery, and a Complete Section on Bandaging. By Orville Horwitz, B.S., M.D., Professor of Genito-Urinary Surgery, Jefferson Medical College; Surgeon to St. Agnes Hospital; Fellow of the College of Physicians, Philadelphia, etc., etc. Sixth edition, revised and enlarged. One hundred and ninety-five illustrations, and one hundred and four formulæ. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1907.

In this little work of three hundred and fifty pages the practical points of modern surgery have been condensed and presented in excellent shape. As a book of reference it is indeed valuable. The illustrations, numbering about two hundred, are very well chosen; they do not, however, take up much space. The sections on suturing and dislocations are especially noteworthy. The latter part of the book is devoted to formulæ, many of which are old favorites.

To student and general practitioner this little work will prove a first-class reference. W. J. W.

The American Journal of Orthopedic Surgery. Philadelphia: P. Blakiston's Son & Co. Issued quarterly. $3.00 per annum, in advance.

Though in the French, German and Italian there are journals devoted to the special work of orthopedic surgery, yet the *American Journal* is the only one supplied in English to the English-speaking world. It is now in its fifth volume and has won for itself a place second to none. For fully half a century orthopedic surgery has had in the United States representatives whose names were well known to the profession the world over.

This journal is an official publication of the American Orthopedic Association and has taken the place of the "Transactions" published for so many years. The Association has a strong membership of men who are devoting their lives exclusively to this one department of surgery—admittedly one of the most difficult. Very largely through the influence and work of this Association orthopedic surgery has made rapid advances in the last twenty years.

A list of the subjects discussed in the second number of Volume V. sets forth most interesting and important topics—topics which the general surgeon and every general practitioner may well study with great attention:

1. Neoplasms and their relations to orthopedic surgery.
2. The mechanics of lateral curvature.
3. Typhoid spine.
4. Typhoid spine.

5. The operative treatment of Spina Bifida.
6. Congenital dislocation of the hip.
7. Acquired Coxa Valga.
8. Oil in the mobilization of joints.
9. Chondrodystrophia Fetalis.

The above is not a journal-worn list, and the subjects are handled in such a manner as only those can do who have special facilities for becoming familiar with the conditions and diseases under consideration.

Every English-speaking surgeon and many who are in general practice should keep this journal on file. B. E. M.

Squint and Ocular Paralysis, with a short account of the Disturbances of Muscle Balance. By E. Lucas Hughes, M.R.C.S. (Eng.), Clinical Ophthalmic Assistant, Royal Infirmary, Liverpool. London: H. K. Lewis, 136 Gower St., W.C. 1907.

The newer ideas as to the fusion faculty in vision have led to a revival of the non-operative treatment of squint. Javal was, perhaps, the originator of this treatment, about 1860. Anyone who has read his "Manuel du Strabisme" will recall wondering not only how Javal had the patience to persevere, but how he ever managed to persuade his patients to do it. That some patients yield to the non-operative treatment is well known, but its chief merit is as an adjunct to operation, giving a perfect result in that by it binocular vision is established. The general practitioner should be versed in the non-operative treatment, and in this manual will find it adequately treated. The author takes the position, entirely tenable, that "although operative measures are sometimes absolutely necessary in ordinary squint, the later stages of ocular paralysis and heterophoria, . . . yet much can be done, speaking generally, for all kinds of squint and tendency to squint by patience and perseverance in non-operative measures."

M.

A *Text-Book of the Practice of Medicine.* For Students and Practitioners. By James Magoffin French, A.M., M.D., formerly Lecturer on the Theory and Practice of Medicine, Medical College of Ohio. Third, revised edition. Illustrated by one hundred and ten engravings in the text and twenty-five full-page plates in tints and colors. New York: William Wood & Co. 1907.

The acceptance by the medical profession of three editions of a practice of medicine in as many years is not a common occurrence. There must be decided merit in the work, and it must have been written in an easy, entertaining style. This last edition, which is very much larger than the former, has been brought thoroughly up-to-date, and, like the former, has not been over-

loaded with theories. The departments of infectious diseases, animal parasites and nervous system have been entirely re-written. Tropical diseases have been given full description—almost too prolix, while diseases of the skin are omitted entirely.

A considerable amount of space has been given to clinical methods. This is an exceedingly valuable part of the work, and one that will be of the utmost value to both students and practitioners. This Practice of Medicine excels in one thing that many others are sadly lacking, namely, treatment. The book is one of the best, if not the best, published in the United States. The house of Wm. Wood & Co. alone is sufficient to ensure a sound work well put together, and in this instance they have excelled themselves. W. A. Y.

Diseases of the Nervous System. Edited by Archibald Church, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence, Northwestern University Medical Department, Chicago, Ill. An authorized translation from "Die Deutsche Klinik," under the general editorial supervision of Julius L. Salinger, M.D. With 195 illustrations in the text and five colored plates. 1160 pages. Cloth. Price, $7.50. London and New York: D. Appleton & Co.

In this excellent volume Dr. Church presents to the profession one of the most valuable works on Diseases of the Nervous System ever published. The list of contributors is composed of some twenty-one of the most prominent neurologists in Germany and Vienna.

The translators of the volume have conferred a favor upon the English-reading members of the profession by their excellent rendering of the text.

The first two sections, on the Macroscopic Anatomy and the Normal and Pathological Histology of the Central Nervous System, form an excellent introduction to the work and are especially valuable for clear, accurate, and well-ordered description. The section on General Neurological Diagnosis is most instructive and is of special value to the student. Quinche's method of lumbar puncture is a very important and practical contribution, also the sections on Myelitis and Tabes Dorsalis are especially exhaustive and helpful.

Contrary to what we would expect from a work by German authors, the therapeutic side of the subject has been taken up in a most practical manner.

The typography and plates of the work are all that can be desired and are of great value to the reader.

The book will prove of great service to the physician and student, and to the specialist in this branch of disease it is invaluable. E. C. B.

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Original Contributions.

THE COUNTRY DOCTOR.*

BY N. A. POWELL, M.D., TORONTO.

Ladies and Gentlemen,—Possibly it was a kindly regard for my health that prompted the officers of your Society to extend to me an invitation to address you this evening. They may have been thinking with a certain Western poet that

> "When a fellow has a story that he thinks he ought to tell,
> If he does not get to tell it, why, of course, he don't feel well."

I alone from the large faculty of this College can look back upon ten years of life as a country doctor. But it is not the story of that decade—not my own story—that I propose to tell you. Rather, it is that of my brothers and comrades, men whose lives I have been watching, lo! these many years.

My personal experience might teach you less than that of others, since I had the good fortune to succeed to an established practice, and so missed the heart-breaking wait and the long up-hill struggle that marks the earlier periods of many a doctor's life.

The theme you have given me is one that might well arouse to eloquence even a member of the silent profession. As when the sun in early morning tips with radiance the trodden snow, so could I wish for the white light of potent words with which to bring out the lights and shadows of that high vocation to which the country doctor is called; but, conscious of the greatness of my subject, and of my own limitations, I ask in advance your indulgent consideration, recalling the words of that old professor of rhetoric who, to a

* An address first given to the students of Trinity Medical College in 1890 and repeated by request before the Medical Society of the University of Toronto, Dec. 1907.

student before him for trial, said, "Sir, your time is five minutes—your subject the immortality of the soul." How shall we begin the study of the country doctor? The painter, the poet and the novelist can aid us, and for a few minutes I may accept their aid, but in the main I must try to portray him for you as I have seen and known him, off guard and in his own environment.

We may ask the poet about our subject, and from England, with apologies to Kipling, comes this answer:

"As I was goin' 'ome to bed, through a muddy, country lane,
I seen a man in a oilskin cape, atrudgin' through the rain,
'E 'adn't a match, an' 's pipe was out, an' I ses to im, 'Oo are you?'
An' 'e ses, 'I'm a doctor, the country doctor, surgeon an' midwife too!'
Now 'e never gets paid for 'arf 'e does, an' 'e does the work of two,
An' 'e isn't one of the gentlefolks, an' 'e ain't like me nor you,
E's a sort of a bloomin' chameleotype, surgeon an' midwife too.

"An' I seen 'im again with a knife an' things, and the sweat was on 'is brow,
'E was trying to mend the cuts of a bloke as 'ad spiked 'isself in a row;
'Twas late at night, an' 'e 'adn't no light, to see what 'e 'ad to do,
An' 'is pal was a doctor, a country doctor, surgeon an' midwife too.
'E 'adn't got far with 'is little job, 'e wasn't but 'alfway through,
When the bloke sits up and asks for a drink, the same as it might be you;
Ho! they ain't no special anesthetutes, surgeon and midwife too."

Certain also of your own poets can tell us of him; none better than Dr. Drummond.

"But dere's one man got hees han's full
T'roo ev'ry kind of wedder,
An' he's never sure of not'ing but work and work away;
Dat's de man dey call de doctor, w'en you ketch him on the countree
An' he's only man I know me don't got no holiday."

The novelist will tell us of William Maclure, and as we read our heads are bowed in thankfulness to *der lieber Gott* for men of that heroic type whom here in our own land we know and love.

"The Guardian Angel" by Holmes, and "The Country Doctor" by Sarah Orne Jewett, give us splendid types, and not less worthy of study is the physician whose life history comes out in the series of books written by one who hides her identity behind the pen-name of "A Commuter's Wife."

You have all seen copies of Luke Fildes' noble picture, "The Doctor."

"On one side stands the world destroyer,—Death,
And on the other, oh most piteous strife!
An infant with a rosebud look and breath,
A baby fighting for its little life."

As I look at it every day, I can find no words to describe the central figure more fitting than those of the Quaker poet:

> "A face that a child would climb to kiss,
> Strong and manly, and brave, and just,
> That men may honor, and women trust."

Well might Sir Mitchell Banks exclaim, "The men that look like that man, whatever be their business or trade or profession, whatever be their wealth or their social position, I say of such men is the kingdom of Heaven."

A country doctor is a perfected and evoluted medical student. Now you know just what a medical student is—at least you think you do, and from your standpoint perhaps you do. From the standpoint of your teachers, he is a rough, warm-hearted, generous, brainy fellow, with energies to be directed, and with boundless possibilities for future usefulness. From the standpoint of a city policeman he is one shade darker than a Nihilist, while from that of a little girl out home—well, you gentlemen who come here with mortgaged affections, know what he is to her. On two points regarding him all will agree. He quickly sees through sham and pretence, and (outside the class-room) he is never at a loss for a timely answer. Let me illustrate this point:

In the earlier history of our College, there were students here, who, being the sons of ministers, felt it their duty to be a little wild in order to restore the balance. It is told of one of these gentlemen that once when "his jag was heavy upon him" he dropped to sleep in a barber's chair. When the knight of the razor said to him, "If you don't hold up your head, I can't shave you," the reply came quickly, "Then cut my hair."

And you remember when that church down street took fire and the students all turned out to see it, one of them stated the case in two words, "Holy smoke."

From raw material such as this the country doctor in our day and generation is evolved. Like the millers, we manufacture some for home consumption, and "grind" the rest in bond for export.

Probably the first physician, surgeon and accoucheur who ever engaged in country practice was the father of our race, Adam Primus. A photograph, the negative of which has unfortunately been lost, represents him giving catnip tea to little Abel, while his wife, Eve, suffering from a sick headache, binds up her throbbing temples with a fig-leaf handkerchief. Ever since Eden was lost the three most constant and universal demands of humanity have been water, food, a doctor.

Now, all who are graduated from our Colleges cannot be surgeons and live in cities. It takes ten thousand people to support

a surgeon, while with one thousand a physician can live and save money. Besides, to get a living practice in a city takes about eight years, in a town, four, and in a village only one or two.

Scene First.—And so it comes about that the curtain rises on our graduate as he hangs out his shingle at the cross-roads, and hires a front and a bed room for himself and a stall for his horse. While he is waiting for calls, we will consider his environment and his preparation for the life he is to lead. Around him stretches the country as God made it and as man is trying to improve it. The roads he will soon learn to follow in the dark, as yet know nothing of the improvements suggested by the late Mr. Macadam. They curve and wander in search of the easiest grades, and at times they end in squirrel tracks that run up the trees. The forest primeval borders the clearing on each farm lot, and the houses are of frame or log. Scattered here and there are little villages like the one in which he has located "houses clustering like chicks around the motherly church roof," as Lowell happily puts it. He may have a dozen of such hamlets within what is to be his sphere of influence. His college text-books are his library, a hand satchel is ample for all his instruments, while a shelf or two contains his slender stock of drugs. The money saved from school teaching was just enough to get him through the council, so from his father's farm a horse is spared, or one is bought on a slow note with paternal backing. This steed is not apt to be one that will get up an epidemic of paralysis among those who watch him travel. At first a saddle is bought, later a buckboard and cutter have to be procured. A buggy only puts in an appearance when some of the rocks are off the road, and another kind begin to pile up in the doctor's pocket, replacing the vacuum he has so long harbored there.

Scene Second, two years later.—The first novelty of caring for sick folk has worn off, and our doctor is winning his way to the confidence of the community, but of late into his life a new and strange unrest has come. His first diagnosis of his own disease is, "A subacute nostalgia." Very soon the symptoms point in quite another direction. It is not his old home he is longing for, but the new one he is to build. The lights that gleam across the snow from happy firesides make him feel more and more his isolation. His boarding-house loses its attractiveness, and about this time he begins to make certain calls that do not go down on his visiting list. At first he seeks excuse for these, but later he is somehow expected, and he is too thoroughly a gentleman to disappoint a lady. Before very long someone goes driving with him, and sits tucked up in the cutter while he makes his visits. The most widely spread of all maladies is upon him. You gentlemen, who study vital statistics, are well aware that more fall in love than in war. But the doctor does not fall in love. He walks right in with his eyes open, guided

by that instrument of precision, the heart. He does not circle around and backpedal on his affections till all social and monetary advantages are fully considered. He does not need to, for right here his professional advantages show to good account. Lawyers see the worst side of humanity, ministers the best side, while physicians see it just as it is. With his special knowledge of all the girls in the country, and his common sense, it would require positive genius to make a blunder. He makes no mistake, and the very best girl of them all is the one who has by this time agreed to call him "George" instead of "Doctor." With womanly intuition she reads him through and through, and knowing full well that it is a terrible endorsation of a man to marry him, when he speaks she answers as a maiden in the land of the Dakotahs answered Hiawatha, "I will follow you, my husband!" To the physician, overtaxed in mind and body, struggling for his daily bread, and weighed down with the awful responsibilities of his calling, a gentle, loving wife is the greatest of all good gifts. To all fair things she will lend a fairer charm, and from the home she will help him to create will come the purity, the hope and the courage with which from this time on he fights the battle of life. To her will be justly due a full half of his success, and far more than that proportion of all the happiness of his life.

Scene Third, ten years later.—And now our doctor is an established and prosperous man. Long ago his new house was built, and if not the best, it is apt to be the most tasteful in the village. You see, he consulted his wife when it was planned. Sancho Panza said, "Women don't know anything, but that man is a fool who don't take their advice." He owns a farm on the Fourth Concession, is Chairman of the School Board, Reeve of the Township, and an Elder in the Church. His political convictions are strong, and his influence widely felt. Sir Wilfrid Laurier, or the Hon. Mr. Whitney—I forget which—has his allegiance, and the party has no better or cleaner adherent. He is known and loved, and trusted and overworked, and pitied by all.

Perhaps he has a few enemies—just enough to enable him to escape the Biblical warning, "Woe unto you when all men speak well of you." His reputation has outrun the limits of an ordinary practice, many have urged him to move into the county town, and he has long thought of doing so. But still he stays, waiting till he can meet with someone into whose keeping he can commit the care of his people, those to whom he has given the best years and the best energies of his life. Before we leave him, let us look at the manner of man he is growing to be. Granting that the personal equation is the chief factor in the result, greater than any help or hindrance, it is still true that the silent forces of his calling, those that ride with him over all roads, that sit with him at all bedsides, that are with him in his downlying and his uprising—all these work upon mind, and heart, and body, making him day by day

a better man or a worse one. He is not perfect. To be perfect, an ideal doctor, he would need to have the wisdom of Solomon, the patience of Job, the strength of Samson, the bravery of Joshua, the eloquence of Paul, the meekness of Moses, the faithfulness of Abraham, the charity of Dorcas, and the executive ability of Jezebel. He would have to hunt like Nimrod, fish like Peter, climb like Zaccheus, and drive like Jehu. He would have to keep clear of the gout of Asa, the melancholia of Saul, the gastric infelicity of Timothy, and would still fall short of perfection if he had not the tireless perseverance of the devil himself. Still, he is worth our study, for in scattered settlements over all this greater half of the continent you will find his counterpart, and to some of you gentlemen it will soon be given to live a life like his, and work out a similar destiny.

What of that life, its mirth and its misery, its hopes and its aspirations, its disappointments and its rewards? First, above all, it is a life of unconscious bravery, of devotion to duty, and of the sacrifice of self for the good of others. On what higher plane can any life be lived? "It is only," wrote Goethe, "with self-renunciation that we begin to live." He may not preach the truth, but he lives it, and that is a thousand times better. Perhaps he is not the most regular of church-goers, but

> "He who serves his brother's needs,
> Whose prayers are spelled in loving deeds,
> May trust the Lord will count his beads
> As well as human fingers."

The very nature of his work lifts him towards the ideal. Do I claim too much for it in saying that it is the real spirit of Christianity in action?

> "It knows no meaner strife,
> Than art's long conflict with the foes of life."

Ruskin teaches us the dignity of service, Dickens the divinity of kindness, George Eliot the supremacy of duty, Browning the splendid optimism that comes from unfaltering trust in God, and Lowell the need to give ourselves to others if we would truly help them. All these we find mingled in and making up the life of the ideal country doctor.

If to live and labor and suffer for others, rising above self and selfish ends, is to live truly, then, reverently be it said, he is following with a guidance that he dares not claim, in the footsteps of that one Physician who knew all the truth, and who was and is our Lord and our Divine Exemplar. "Ever since from lips that spake as never man spake came the blessed words that gave to sightless eyes a vision of the blessed sunlight, to ears that had known no sound, the music of birds and of the human voice, that restored strength to withered limbs, and brought back life itself to a frame it had for-

saken, the healing art has been Christlike and holy." Its charities may be, and often are, of that diviner quality taught by Him who gave himself for others.

The bravery his calling develops is that rare quality which Napoleon called "Two-o'clock-in-the-morning courage." It is an easy thing to be brave before a cloud of witnesses, but not so easy when the fight is a losing one and God alone is watching the struggle. Fire broke out one night in a city tenement, and in an upper window a child was seen. Quickly the ladders were run up, and a fireman mounted to save her, but before he reached the top the flames and smoke were upon him. He hesitated and began to drop back. Then one in the crowd cried, "Cheer him!" and from the multitude went up a shout that told of sympathy with him and the life to be saved or lost. Once more he dashed at the flame, went through it, and came back with the little one safe in his arms. No such encouragement comes to the physician, when in some lonely tenement at night he receives his baptism of fire; but from that trial he comes forth in stronger, purer manhood, and never after doubts but that he is divinely ordained to be a minister of help, of comfort, and of consolation unto those who are appointed to suffer. It will be his to "scatter the charities that soothe and bless and save." The devotion to duty that guides him now is the selfsame principle that moved the ten thousand at Marathon, and the three hundred at Thermopylæ, that steadied the thin, red line at Inkerman, that rode into the valley with the Light Brigade, that rushed the trenches of Cronje at Paardeberg, and that gave to us Canadians the heroic memories of Wolfe, of Brock, and of the Jesuit martyrs at the North Shore Huron missions. I could tell you of one who with a lung half solid with pneumonia struggled through night and sleet to be with a patient and guard her from the dangers that threatened in the hour of her motherhood's advent, and of others who charged the banks of snow on blocked and drifted roads, as a soldier might charge a rampart, and whom nothing could stop or even stay when duty called. But why should I? We all know that Canada has many Grenfells and Macharens, but so far few Ian Maclarens to tell of their deeds of quiet heroism. Perhaps it is best so! Our profession would be the last to claim any monopoly of the manly qualities developed upon the campus.

"The sands of the desert are sodden red,
Red with the wreck of a square that broke,
The Maxims jammed and the Colonel dead,
And the regiment blind with dust and smoke;
The river of death has brimmed its banks,
And England far and Honor,—a name.
But the voice of a school-boy rallies the ranks,
'Play up! Play up! and play the game.'"

The country doctor is no quitter. He plays the game, not simply while the light lasts, but through all the hours of darkness till the shadows flee away and hope revives.

He is the best friend a community can have. He is the confidant of lovers, and helps to make up their quarrels. He brings together again the husband and wife whom differences have separated. He is father confessor to half the country and keeps his trust with knightly honour. His sympathy is deep and genuine, and is not worn upon his coat sleeve. No one more than himself feels contempt for a "gusher" in or out of his profession. In every calling you find them.

After a consultation an old Quaker lady once said, "Thee will do me the favor not to bring that man again; thee knows I don't like to have my feelings poulticed." Legal persons

> "Trained in every art
> To make the worse appear the better part,"

use sympathy at $100 per day to sway juries. Clergymen sometimes overuse it. An evangelist at one time got into the habit of calling his audiences "Dear souls." Laboring in Ireland, he used to say with effect, "Dear Belfast souls," "Dear Dublin souls," but when he said "Dear Cork souls" it did not seem quite so appropriate.

The sympathy of the physician is expressed, not in weeping with those who weep, but in devising relief for those who suffer in heart, or mind, or body. Far from being blunted by long contact with pain, his sympathy grows keener with each year of added experience.

The old farmer in the Gospel according to Whitcomb Riley says,

> "Doc, you 'pear so spry, jes' write me that recei't
> You have fer bein' happy by,—fer that'd shorely beat
> Your medicine," says I. And quick as seat Doc turned and writ
> And handed me, "Go he'p the sick, and put your heart in it."

The glory of optimism pervades his life. Tell him of Max Nordau's statement that our age is stamped with the stigmata of degeneration and he will laugh you to scorn. In his world he knows that this is not true, and he has no manner of doubt but that

> "Love lights more fires than hate extinguishes,
> And men grow better as the world grows old."

Into every sickroom he carries the inspiration of a cheery, hopeful presence. Fortunately he finds lots and lots of the kindliest humor even in that world of pain and sickness in which he dwells. He is apt to believe that if the good Lord had not meant we should be mirthful, He would never let so many funny things happen. Father Faber once said, "There is no greater help to a religious life than a keen sense of the ludicrous." Such a divine gift softens the

asperities of life and lessens the annoyances of practice. As anatomists you know how close to the fountain of tears are to be found the ripples of laughter that run around the eyes. So sorrow and mirth go close linked all through life. A messenger calls when he is out and says, "I got some medishin from the Doctor, and I want to insult him about it." Is it a case of sciatica? The old man says that "a ball of hot wind keeps running from his hinch to his hock." And the Irish woman who wishes to save his feelings and cannot report improvement, says, "Doctor, I have given little Patsy all your medicine, and he is no worse thin."

Night-calls and bad roads have long been recognized as chief factors in a country doctor's misery. When worn out and half sick, a call at bedtime or later comes with a sense of personal affront, and its bearer is looked upon as one far gone from original righteousness. Whitcomb Riley knew of this when he wrote:

"May be dead of winter,—makes no odds to Doc,
He's got to face the weather ef it takes the hide off,
'Cause he'll not lie out of goin' and P'etend he's sick hisse'f like some
'At I could name 'at folks might send for and they'd never come."

We know (but others do not) that the really necessary calls that a physician receives would hardly suffice to keep up his horses. Besides that, it is the dead beats who are most imperative, and most untimely in their calls, and who take care to know nothing of the symptoms, lest medicine be sent and the visit be deferred until the morning. You are wanted "Just as quick as you can get there," and when you do get there the "black diphthery" is a follicular tonsillitis, or the "erysipelas" is a nettle rash. There was a prophet in the land of Uz who sat patient and self-poised as the messengers with evil tidings came to him thick and fast. Either we are not his lineal descendants, or this old patriarch failed to transmit to us the secret of his calm philosophy. When such calls come, the country doctor does not always appear to the best advantage before his family, as he starts out on the road. But starlight, and let me whisper, a quiet smoke, are capital sedatives, and long before the patient's house is reached, the ruffled temper is smooth again, and the instinct of helpfulness dominates him.

If the Litany could be lengthened to read

"From country roads in spring and fall,
Good Lord, deliver us all,"

physicians might attend church more regularly, and would join with fervor in this part of the service, if in no other. Of such a highway Mark Twain once wrote that if he ever went to the place of eternal torment, he wanted to go over that road, as then he would be glad when he got to his destination! Oh, the mud, the unutter-

able, bottomless, clinging mud, the—the—but I cannot speak of this subject with composure. Its memories are too painful and overcome me.

Better far the drifts of winter that can only be climbed on snowshoes before being shovelled out and broken for teams, than the axle-deep and glue-like mud that sticks to my memory in dreams as it used to stick to the feet of my horses and all but pull their shoes off.

More than any other, the country doctor is a man who does his own thinking. "In this world," said the greatest of German writers, "there are few voices and many echoes." City-bred physicians lean on each other and quote precedents and authorities as glibly as lawyers do. Few men really think. Many think they are thinking, but all have opinions. You had them early in life! Your first opinion probably was that you were sorry that you had come here. Next you held, perhaps vaguely, that if dinner wasn't ready, it ought to be. I have met city physicians who reasoned about as profoundly as you did then, who would seize upon a single symptom and shut their eyes to everything else, but who have been getting along fairly well in practice. In the country they would have failed miserably. Ignorance, like crime, naturally hides in cities. Country practice offers no *asylum ignorantium*. The doctor there goes right to the front to be known and read of all men, and what is more important, of all women. The people among whom he dwells belong to the great middle class, intelligent people, capable of forming correct judgments. Before such judges he stands, and he can shirk no responsibility since sharp eyes follow him everywhere, observing and discerning what manner of man he is. Trained by the life he leads, he gains self-reliance, presence of mind, fertility of resource and sagacity, and thus becomes a self-contained man, capable, skilful, and safe. To him a consultation is always something like a confession of failure and a downfall of pride. To this class belonged Jenner and Sims, McDowell and Robert Koch, with countless others—grand men who saw the distant tops of thought which men of common stature never see. He is charged with being at times a "routinist" and a one-idea, or a one-sided man. If he has but one idea, it is his own, and he is that much ahead of quite a few other people. Remember also that one-sided men make our only aggressive leaders. Once more, to quote from the Hoosier poet,

> "And it was given us to see beneath his rustic rind
> A native force and mastery of such inspiring kind
> That half unconsciously we made obeisance."

He may give less attention than his city brother to dress—may even at times be as unkempt as a yearling colt with the

run of the burr pasture, but by intuition, that is, by the working of the unconscious mind, he grasps the essential facts that success in gaining and holding practice is less a matter of therapeutics than of tact; that the patient has a right to his whole-hearted attention, and that whenever it is at all possible, he must thoroughly understand the case and take a hopeful view of it.

Such the work. Now, what of its rewards? In ten years of hard work a very large sum can be accumulated—on one's ledger. What shall it profit a man if he has an account against every man in the country and cannot collect a cent? For your encouragement, let me tell you that from 75 to 90 per cent. of money earned in the country is good, or will be some day—after threshing, perhaps, or in the spring. While with health a modest competency is assured, there is absolute security from any sudden attack of affluence.

But there are rewards which come in daily and are not to be expressed with the dollar sign before them.

"A poor man served by thee shall make thee rich;
A sick man helped by thee shall make thee strong;
Thou shalt be helped by every sense of service which thou renderest."

It may be yours to feel the happiness of the patriarch of old. "The blessing of him that was ready to perish came upon me, and I caused the widow's heart to sing for joy."

Having tried to outline the campaign of this undecorated soldier from the time when first the *Reveille* aroused him to action, now, before the bugle note of the last call "Lights Out!" is heard, let us ask as to his final reward. Our question goes to those who have attained the prize. List while they speak:

"In life's uneven road
Our willing hands have eased our brother's load;
One forehead smoothed, one pang of torture less,
One peaceful hour a sufferer's couch to bless;
The smile brought back to fever's parching lips,
The light restored to reason in eclipse,
Life's treasure rescued like a burning brand
Snatched from the dread destroyer's wasteful hand—

"Such were our simple records, day by day
For gains like these we wore our lives away.
In toilsome paths our daily bread we sought,
But bread from heaven attending angels brought.
Pain was our teacher speaking to the heart,
Mother of pity, nurse of pitying art;
Our lesson learned, we reached the peaceful shore
Where the pale sufferer asks our aid no more—
These gracious words our welcome, our reward—
'Ye served your brothers, ye have served your Lord.' "

167 College St., Toronto.

THE UNBALANCED FOOT.*

BY B. E. M'KENZIE, B.A., M.D., TORONTO,
Senior Surgeon, Toronto Orthopedic Hospital.

PROBABLY the most common cause of lameness is a foot that is without normal balance. In order to perform its function efficiently and with comfort to its owner the foot should come fully under the superimposed weight of the body and should have sufficient strength to maintain its proper balance when the weight of the body and the force of propulsion fall upon it.

The foot normally presents three arches. The longitudinal one has a single pier behind and a pier in front consisting of five divisions, the first and fifth of which receive the most of the down-

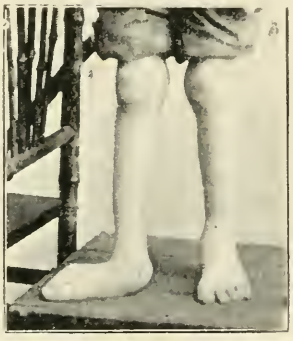

FIG. 1.

ward pressure. The second arch is a transverse one beneath these five divisions, and, therefore, supported at the inner and outer borders of the foot. In an ideal condition the heads of the intermediate metatarsal bones ought not to press upon the ground. The third arch is in many respects the most important one, and is incomplete, when considered in its relation to either foot alone. It is a half arch, having its outer support at the outer border of the foot, while the inner termination of this half arch is found at the inner border; hence the arch is complete only when the two feet are brought together, and the arch passes, therefore, from the outer border of one foot to the corresponding part of the other. The inner portion of each half arch being unsupported, it will be seen that when standing upon one foot the body weight will tend to lower the inner or unsupported portion of this half arch. In other words, there is a tendency even in the normal foot to roll

* A clinical lecture delivered at the Toronto Orthopedic Hospital, Nov. 2, 1907.

inward, bringing the inner malleolus and the inner border of the foot nearer to the ground than when the weight is borne normally upon both feet.

Nature did not make any mistake in the fact that the foot thus tends to roll over towards its inner border, a condition which, when present in abnormal degree constitutes one of the important elements in the weak or flat foot. Balance is maintained in the normal condition by a group of muscles passing behind the inner malleolus and in front of it to the inner border and the under surface of the foot, which is stronger than the group of muscles pulling upward at the outer border of the foot. In this way a comfortable balance is maintained, while greater elasticity is secured than would be the case if the foot were evenly balanced

FIG. 2.

without reference to the muscular action. This condition points to an interesting indication for treatment in the weak foot, which is to educate the individual so as to develop and strengthen the inner group of muscles and to cultivate a habit of holding the foot well inward in practice, so as not to allow it to roll into a position of pronation. The pronated foot is a weak foot, and that condition is favored by indifference, bad training, high heels and narrow boots, etc.

It is possible, also, that the foot, from various causes, may maintain such a position as to be moved too far toward the median line, thus allowing the transmitted weight to fall too much toward the outer border and have a tendency to roll the foot over outward. In feet that are in a general way regarded as normal the former condition is very much more common than the latter.

In a similar manner, if for any reason, from paralysis or

otherwise, the anterior group of muscles at the ankle is not in a position to balance fairly the posterior group, the heel will eventually be drawn upward beyond its normal position and so maintained. This condition is seldom seen except in the ordinary club foot or as a result of paralysis, and is known as a condition of equinus.

Finally, in paralysis, and very seldom resulting from any

FIG. 3.

other cause, the posterior group of muscles may be so weak that their antagonists at the front of the ankle draw the anterior portion of the foot upward and the heel points abnormally downward —calcaneus.

There is an ideal position of balance for the foot, such a position as one may not be able to demonstrate with exactitude; but

FIG. 1.

for each individual there is such a position which affords the greatest degree of sustaining power for the body weight. Any departure from this ideal position means a pathological state to a greater or less degree, and may be in the direction of any one of the four conditions named above. It is true that there must be a considerable margin of deviation allowed in all directions while yet the foot shall be considered normal in position. One most

important cause for the lack of balance above referred to, and seemingly one of increasing frequency, is infantile spinal paralysis, or acute anterior poliomyelitis. A characteristic of this affection is its uneven distribution. The primary pathological lesion is in the anterior column of the chord, but in its manifestations in the muscles, for example, which control the ankle, it may affect only one group, as, for example, the group at the internal border, in which case there will result a pronated foot (fig.1 and fig. 2), one variety of the weak foot; or it may result in a complete or partial paralysis of the peronei, when the foot will roll over toward its outer border, giving us a supinated foot (left foot, fig. 2). In a similar way, if the anterior group chiefly be affected, the posterior may so draw the foot as to give a condition of

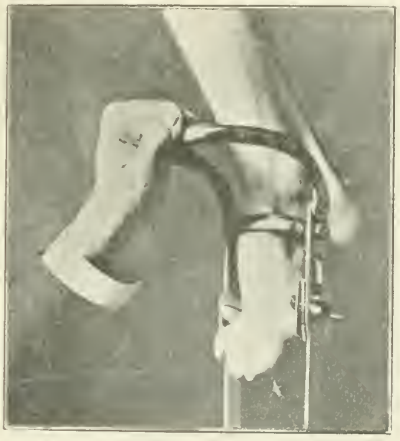

FIG. 5.

equinus; or a complete or partial paralysis of the calf muscles may give us a condition of calcaneus (fig. 3 and fig. 4).

The illustrations in this article will show the varieties here referred to as resulting from infantile spinal paralysis. The indication for treatment is to restore balance. Little can be done by art in the way of improving the condition of the muscles disabled through the disease referred to, but if a group of muscles is pulling the foot strongly in one direction, as, for example, inward, it would certainly assist in restoring balance if a tendon, which is so inserted as to pull inward ordinarily be transferred and inserted at the outer border, thus lessening the inward pulling force and increasing that which draws the foot outward.

More than twenty years ago Nicoladoni proposed this plan of operation, and it has been more or less carried out in practice, especially during the last fifteen years. It is a very attractive plan of operation, and has produced good results, but less success-

ful than was expected. Wherever there are muscles whose joint action draws the limb unduly in one direction, some one or more of their number may be changed by detaching it from its bony insertion and transferring it to such a position as will give it the best mechanical advantage pulling in the opposite direction.

Another important means, if used soon after the onset of the disease, before muscular contractures have resulted, is found in the wearing of a brace at night, such as will hold the foot in a normal position. It will readily be seen that while lying in bed the anterior part of the foot is carried downward by the weight of the bed-clothing, and hence if there is a disposition to permanent contracture of the calf muscles this will be prevented by the brace just referred to.

Also, boots may be so built as to have a tendency to prevent

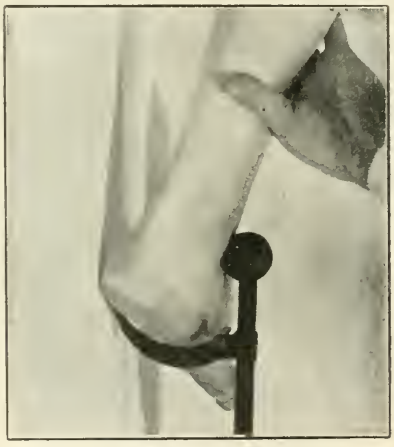

FIG. 6.

the foot from rolling either inward or outward into an abnormal position. The sole of the boot in the one case should be made wider and thicker at its inner border, and should be so shaped as to make the inner border of the boot markedly concave. If the foot, however, tends to roll toward its outer border, the boots should be so built as to make the sole wider and thicker at its outer border, and so shaped as to divert outward the anterior part of the foot.

Such means as just referred to will be satisfactory only in the milder cases. Where there is marked deformity at the mid-tarsal joint, either turning the anterior part of the foot very strongly inward, outward or downward, operative measures should be adopted. When there is great out-turning of the anterior part of the foot in its relation to the hinder portion, known as a con-

dition of valgus, removal of the scaphoid and of the articular surfaces, which will then be brought into contact, with a view of obtaining bony ankylosis, proves a highly satisfactory operation, thus shortening the internal border and strengthening the arch. A similar operation may be done by removing a wedge of bone from the outer border of the foot at the medio-tarsal joint and carrying the anterior part of the foot outward so as to close up the gap in cases where the varus is strongly marked.

In a smaller proportion of cases there is complete paralysis, or very nearly so, of the muscles which move the foot, constituting what is called a "flail foot." In such a case excision of the ankle joint is a most satisfactory operation. It is best performed by making a horseshoe-shaped incision, with the opening upward and its middle below the outer malleolus, and then turning the foot inward so as to fully expose the ankle joint, removing

FIG. 7.

very freely the articular surfaces so as to obtain red bone in as large a quantity as possible, accurately adjusting the surfaces and bringing the foot back so as to get good apposition between the astragalus below and the tibia and fibula above. It is highly desirable that there shall be a strong and extensive bony union. The writer finds himself performing these excisions at the various joints of the foot more and more frequently as the years pass by, because the results have proved highly satisfactory.

In a foot which is disabled because of paralysis there are two elements causing the disability: first, the paralysis *per se;* and second the deformity, or lack of balance, or the flail foot. The first of these cannot be greatly modified by any known means; the latter is best treated by surgical means.

When the arch of the foot has become unduly high—talipes arcuatus—there is frequently great discomfort to the patient, because the weight thrown upon the heads of the metatarsal bones causes an extensive development of callus which becomes very

painful. In such a case great improvement will promptly result by cutting the plantar fascia and ligaments, straightening out the foot, and adopting measures to prevent its recurrence. The tenotome is passed in behind the artery until it reaches the under surface of the anterior portion of the os calcis, where free section may be made of the plantar ligaments and fascia. The club foot wrench (fig. 5) may then be employed, even in the strongest feet, to raise the anterior portion of the foot, thereby causing it to become longer to the extent of one inch or more. This condition cannot be maintained except by the use of well-constructed boots and night braces referred to above.

Traumatism is a frequent cause of lack of balance at the ankle. A comparatively frequent mishap after Pott's fracture results from union of the broken parts in such a way as to have

FIG. 8.

the foot placed too far outward, so that the body weight falls unduly upon the inner border, causing traumatic flat foot. This condition commonly demands osteotomy in order to replace the foot. A brace and boot specially constructed may be employed, but are less satisfactory than a radical operation.

As a result of fracture at the ankle, much less frequently, the foot is placed too far inward. Osteotomy and replacement are the most effectual remedy. The canthook wrench (fig. 6) is a powerful aid in replacing the foot in the cases just described.

Falls from a height and other irregular injuries frequently produce fractures of foot bones resulting after union in disturbance of balance, which causes much disability.

Another instance of greatly unbalanced foot is shown in Fig. 7. The right tibia was cut through near its lower end by the

knife of a mowing machine in such a manner that the epiphysial cartilage was destroyed. Satisfactory recovery, except that the tibia did not grow at its lower end afterward, and consequently the fibula became of greater relative length and caused the foot to be carried much inward from the proper line of transmitted body weight.

Osteotomy of tibia and ablation of the lower epiphysial cartilage of the fibula, followed by replacement of the foot, were required, resulting as seen in Fig. 7.

To sum up the general trend of this lecture, one may say:

1. That a lack of balance, so that the foot is not maintained directly under the body weight, is an important, if not the chief, cause of discomfort and disability in walking.

FIG. 9.

2. That in the slighter cases balance may be restored by the use of properly constructed boots and braces.

3. That, in young persons especially education and development of the muscles is an important factor in treatment.

4. That tendon transposition to restore balance as indicated is fairly satisfactory in its results.

5. That excision at the joint where indicated has proved itself a highly satisfactory method of treatment.

6. That osteotomy is frequently necessary.

7. That a properly designed night brace is important to prevent deformity.

8. That in all cases the great essential is to place and maintain the foot evenly and directly under the body weight.

ADDRESS DELIVERED TO THE 1907 GRADUATING CLASS OF NURSES, THE HOSPITAL FOR SICK CHILDREN, TORONTO.

BY ALLEN BAINES, M.D., C.M., L.R.C.P. (Lond.),
Physician to the Hospital.

Addresses containing words of kindly advice to the graduating class have been given for so many years, that one has to run the risk of unintentional plagiarism, for the lines to be followed remain the same in each case.

The first word must be one of hearty congratulation, first to the graduating class for the highly satisfactory manner in which they have finished their course, and also to Miss Brent and to her assistant staff, through whose instrumentality this successful course has been run.

We indeed have all to thank our Lady-Superintendent, who, in addition to valuable experience gained in her own excellent training, and to her great ability and capacity for imparting that which she knows, is possessed of a rare organizing power, which has clearly shown itself in her choice of lady assistants and nurses. With such good primary working material, and with a curriculum embracing every subject necessary to the moulding of a well-trained and educated nurse, it would be strange indeed if our graduates were not of a very high order. Of one thing I feel sure with regard to those whom I am addressing: wherever they go, and however many years may pass without their being able to reunite as a body, they will always look back with deep affection upon this hospital as their Alma Mater, and will also hold in love and reverence, as we all do, our deeply esteemed chairman, whose great heart and mind have added to many previous acts of generosity this latest, of building and furnishing a nurses' home in connection with the hospital, which, fitted as it is with every luxury and comfort, stands as the envy of all the hospitals in the world, and as a witness that, through the years to come, shall testify to the beautiful deeds of a man whom we all love and delight to honor. Long may he be spared to guide and advise us.

I would like to divide my remarks into two classes: those which concern the strictly professional, and those which have to do with the ethical side of nursing.

First, then, I will speak of that use of *observation*, which has to centre itself upon the medical condition of a patient. This power of clinical observation is one which goes farther, in the eye of a physician, to mark a perfect nurse than any other. Without

it we may have an excellent attendant, but she is simply a faithful and kindly automaton.

Nothing in my estimation marks the capable nurse in a general way more clearly than her history paper and chart. A glance at the remark column reveals the work of a clear, clever, observing nurse or the meanderings of mediocre nothingness. Who could dare pronounce that nurse capable, who has not studied the significance of the attitudes, the facial expression, the voice or the cry of a patient, and who therefore does not remark clearly upon these in her history paper? Is this faculty a gift? Only to a very limited extent. It is found in every nurse of good ability and intensity of purpose, and can be brought to perfection by training and study.

Loyalty is another great attribute. First, to the attending physician. Never swerve from absolute fidelity to the physician in charge. Without this watchword you are dangerous to one who should be, and generally is, your best friend. Once let a suspicion of disloyalty arise, co-operation ceases, and co-partnership in the case must end.

How simple it is to be disloyal. A mere look, a shrug of the shoulders, an indiscreet word, produces, in the mind of an anxious mother, wife or sister, a feeling of wavering confidence, which soon leads to distrust and ends in a request to the physician to resign his case to another. He may be dumbfounded and unable to understand the meaning of such procedure, but, believe me, it is only a matter of time ere such conduct brings its own punishment and reflects with swift justice on the thoughtless nurse. Loyalty is a beautiful word, descriptive of grand and noble qualities and embracing fidelity, truth, obedience and devotion.

Be loyal also to yourselves in the matter of health and personal welfare. By this I mean, while giving the closest attention to your patient, remember that you are not made of wire or rubber, and can only stand a certain amount of fatigue. Should you feel the working hours too long, and the strain telling on your general strength, do not hesitate to inform the attending physician, and rarely indeed will you find him fail in bringing about a more beneficent state of affairs. See that you get proper rest, proper exercise and proper food at regular hours.

Lastly, let me impress upon you the necessity of at least one month's absolute rest in vacation. A holiday enjoyed in the country, away from telephones and the trying atmosphere of the sick-room, with its innumerable and necessary calls upon your sympathy, nerve and strength, will amply repay you in renewed health and vigor.

So far we have dwelt upon the features of *active nursing*, but

your profession calls for qualities that shall fit you for work beyond that of your nursing office—work that in most cases will occupy the greater portion of your time.

The days of sickness are succeeded by that longer period of convalescence, in which, because the sands of life are still running low, the words of the Preacher are realized: "Desire fails, and the grasshopper is a burden." Over this weary waste of colorless days and restless nights you must guide your patient with a wise hand. Health and strength are still far away, and yours must be the task of winning back interest in life, of beguiling the time and of cheering the intense depression caused by weakness. This you may do greatly by the aid of books—those that you have read yourself and those that you read to your convalescent.

Good books, then, should be the companions of your own leisure, in order that you, absorbing the thoughts of great minds, shall so mould and enrich your own that out of it, as from a storehouse, you may bring forth things new and old to entertain and cheer your patient.

The self-culture of the nurse is of the best kind and for the noblest object. Others may have as their aim the attainment of prominence or of influence, the outstripping of their fellows in the strenuous intellectual race of to-day, but you are doing all in order to better serve the sick and sorrowing, and, in your altruism, are closely following in the footsteps of Him whom you serve, and are carrying out His purpose.

A second thought to do with your use of books is the fine art of reading aloud. At its best it *is* a fine art, a great delight and pastime to the listener: at its worst it is as cruel a torture as was ever invented by the Inquisition! Have you ever endured it? Have you ever lain upon a bed of sickness while a kindly friend, with the best intention, having come to "read aloud," proceeds to gabble off an endless chain of words in a meaningless monotone? Have you ever watched the struggles of the reader, who, never having waited to rest at the landing stages kindly provided by punctuation, at length pauses in the wrong place from sheer exhaustion, and then flounders on, to pull up now and again at a full stop, which is the only landmark of which she seems at all cognizant? In vain do commas, colons, semicolons exist as brakes—for her there are no brakes; on she flies until your head is in a whirl, and you are only deterred by your weakness and grudging courtesy from forcibly checking her. If you have suffered this, you will know what bad reading can mean. Good reading is very rare. Even at lecterns and in rostrums it is by no means the rule. There are so many things for the reader to watch in herself. First, of course, this matter of the proper proportion of

punctuation; then enunciation—clear, low and distinct, with a careful attention to the end consonant of a word. Then the voice and tone (so important a matter at all times in a sick-room), carefully modulated, resonant yet soft, as a woman's voice should always be. If fiction is being read, then a certain amount of dramatization is required: remember that you are impersonating all these characters to your listener. Throw yourself, then, into the minds and moods of these, express them with your voice, and let her see these men and women playing their part as upon a stage. Oh, you do not know what pleasure you can give to the listener, what justice you can render to the writer, by the cultivation of expression. Feel your words as you utter them, and you will transport your patient into those scenes of which you read. Through you she shall even hear the chimes ringing, shall see and feel the snowdrops nodding on their bank, and for her as for you the human characters of the book shall live and act and speak.

Now, have patience with me while I speak of an inseparable trio of qualities that must be in the possession of every successful nurse. I refer to keen power of observation, tact, and sympathy.

What, then, is this first? This power of observation, whence does it come and how is it obtained? Is it a gift? I think that the manner in which we are apt to speak of qualities as gifts paralyzes humanity. We seem carried back to the tales of our childhood, in which benign, fairy godmothers bestowed especial charms upon a child, and she thenceforth went out conquering and to conquer by these magic forces; or we have a vision of qualities dropped from the clouds into the minds of some favored mortals, while the rest drop back in the race discouraged.

To talk thus is to dishonor the Father whose sun shines on all alike. He has willed that, relying on His power, all things shall be obtained by effort. The very meaning of the word "cultivation" emphasizes this truth. What is to cultivate but to foster and watch the tiny seed growth, and so to nurture it that it becomes a strong plant—a mighty tree.

Cultivate, then, this power of observation, this present and keen attention to all that is passing before you, this comprehension of expression on your patient's face as an index to the mind and the body.

Let sweet sympathy be yours to give. Some, I know, not by reason of hardness, but rather because of an inborn reserve, which is, perhaps, not only an individual but a national trait in the whole Anglo-Saxon race, find it difficult to express deep feeling—to open the floodgates and let loose those streams of tenderness whose source is God, and whose waters refresh the stricken souls of men. I pray you, make the most of your great opportunity.

To you will be open the "wounds that shame would hide"; to you the hitherto dumb souls, moved and humbled by distress, will speak. Do not send them away empty, for lack of a little love. Remember that in your calling you show forth the ideal woman; you stand in league with the hosts of ministering angels to these suffering ones who thirst for sympathy and tenderness as the parched plant thirsts for the dews of heaven.

I think that sympathy will give you tact, that quality springing from a desire to shield others from pain and annoyance. It is so necessary to impress its importance upon you, so difficult to explain its nature! Like some sweet bird that gladdens you with its song, yet ever hides from sight and evades your grasp, so does tact seem to elude an *exact* definition. The Latin word brings us nearest to it—"tactus," touch, handling. Have you ever noticed the peculiar sensitiveness of touch that belongs to the blind? The mind of the tactful person is as sensitive to the feelings of other, to the situation of things, to impressions produced by circumstance, as the fingers of the blind are to touch.

You will, then, understand that you must be sympathetic and observant before you can be tactful; you must be alive to everything about you. So shall you be enabled to stand between your patient and all hurtful things. So shall you be quick to interpret a glance, a passing shadow on the face, to avert another's blundering speech, to control your own features when alarm or surprise expressed through them might shock your patient.

By means of tact you will be enabled to preserve that necessary atmosphere of calm and peace in the sick-room, to speak when speech is best, to withhold when silence is golden, to steer your way by its thread-like guidance through labyrinths of difficulty that may await you in the household and to gain the confidence of your physician and the love of your patient and the members of the family who, with hearts wrung and nerves set on edge by anxiety, look to you for soothing help and find it.

Again, no one in all this working life of ours needs *patience* more than those in your calling. Patience and forbearance are the motto words of the nurse and the physician. With the querulous fretfulness and unreason of the sick, with injustice and interference from without, you will often have to bear. Under conditions of exceptional difficulty you will ofttimes have to exercise a patience great enough to check the hasty answer on your lips and even expel the expression of annoyance from your face. Now and again the struggle would end in defeat and disaster, were it not for two aids to patience upon which you can always depend: your womanly sympathy, to which the appeal of a tired, pained, and therefore irritable fellow-creature will never be in vain, and your own close following of Him who kept silence amid

much threatening. You will remember with Ugo Bassi, in the "Hospital Sermon," that the world is a

> "fitting school
> Of patience, for the time we must remain,
> Of charity towards fellow wayfarers
> Beside us, bearing each his human cross
> In secret or in sight, but each his own."

What remains there more to tell you? Neatness, cleanliness and daintiness of person, all these are indispensable to you. In every walk of life they should be found. The idea of womanhood carries with it the sweet fragrance of that violet chosen by one poet to represent her in quiet seclusion. Sweeter and more acceptable to the patient than all the flowers sent to the sick-room shall be your dainty presence in it.

In closing, let me remind you of what you yourselves must feel. Never, in all your nursing career, will you have a greater opportunity for exercising all that is best in your noble calling than you have had here. Never was there a better setting for the picture of a perfect nurse than this house in which we are assembled and which is your starting-point. It stands as a witness to that in man which is well pleasing to God, an outcome of tender, practical compassion for His little ones. Let me in these ending words show you how you have fulfilled the ideal of a great man who lived before your time, but not before mine. In his day woman's sphere was narrowly limited; in his day there was darkness and unrelieved suffering among the little ones in the crowded alleys of the cities. To him came a vision of how the children should be healed, and the woman, in great work for them, should fulfil herself. He wrote the vision in that unequalled prose, sweeter than verse, which sent his name to posterity as John Ruskin, the singer and poet in prose. He would have rejoiced to-night—we think he does—for the music of his dream, echoed from hill to hill of time, has found its answering chord in you who stand here to-night, among the cots of little sufferers who have been brought in thousands to find comfort and ease in this house, and, in you, a personification of love and tender pity.

This is what he wrote in longing and desire: First, speaking of the tending of her garden by a woman, he continues:

"And do you think it not a greater thing that all this you can do for fairer flowers than these? for flowers that could bless you for having blessed them and will love you for having loved them, flowers that have eyes like yours and thoughts like yours and lives like yours, which, once saved, you save for ever? Is this

only a little power? Far among the moorlands and the rocks, far in the darkness of the terrible streets, these feeble florets are lying with all their fresh leaves torn and their stems broken: will you never go down to them, nor set them in order in their little fragrant beds, nor fence them in their shuddering from the fierce wind? Shall morning follow morning for you but not for them? and the dawn rise to watch far away those frantic dances of death, but no dawn rise to breathe upon these living banks of wild violet and woodbine and rose?"

And your answer has been: *We will arise and go.*

CALMETTE'S TUBERCULIN OPHTHALMO REACTION.

BY JAMES MacCALLUM, B.A., M.D.,
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AND
W. H. LOWRY, M.D.,
Oculist to Victoria Hospital for Sick Children.

On June 25th, 1907, Calmette described in the *Gazette des Hopitaux* a new way of diagnosing tuberculosis in man by dropping into the eye a little tuberculin. As glycerine is irritating to the eye, he uses a solution of dry tuberculin, precipitated by alcohol, in distilled and sterilised water. The solution must be fresh, not kept for longer than two days, and of one per cent. strength. It has no effect on the eye of a healthy person, but in a tuberculous subject, from 3 to 6 hours afterwards, the caruncle and plica semilunaris become reddened. The redness and swelling extend to the palpebral conjunctiva, being most marked in the lower fornix. The patient complains merely of the eye feeling gritty, and small masses of secretion appear. This, called the "Ophthalmo Reaction of Calmette," may last from 18 hours to 3 or 4 days, or even longer.

For its use, one eye should be normal, *i.e.*, free from any external inflammation. The reaction is confined to the eye into which the tuberculin is instilled, but in the *British Medical Journal* of December 28th, 1907, are records of two cases in which instillation in one caused reaction in both eyes.

Ordinary tuberculin—T.R. or the emulsion—or the old tuberculin must never be used in making the test.

If the eyes are both inflamed, or if Calmette's test does not react positively, tuberculin should be used by injection.

We have tried the test in 25 cases, viz.:

Positive Reaction—

1. F. 24 years. Male. Typhoid, followed by ascites. Calmette positive, lasting 10 days.
2. N. 28 years. Male. Acute tuberculosis. Hemoptysis. T. bacilli. Calmette positive.
3. N. M. 9 years. Female. Morbus coxae, with abscess. Calmette positive.
4. G. B. 6 years. Male. Morbus coxae. Calmette positive, reaction lasted 5 days.
5. R. A. 7 years. Male. Pott's disease. Calmette positive.
6. C. F. 8 1-2 years. Enlarged cervical glands. Calmette positive.
7. E. C. 13 1-2 years. Female. Enlarged cervical glands. Chronic bronchitis. Recurrent attacks of strumous keratitis. Family history tubercular. Bossing of frontal eminences, pointed prominent upper canine teeth. Notch in left upper central incisor.

Jan. 17—One drop of one per cent. solution was put into right eye, which was in a healing condition from an attack of strumous keratitis. In 5 hours there was intense reaction, child cried with discomfort. Conjunctiva red, angry and swollen, much lachrimation and photophobia, and some watering of left eye.

Jan. 18—Symptoms aggravated. Cornea stains with fluorescein.
Jan. 19—3-4 of cornea stains. Conjunctiva and sclera angry-looking.
Jan. 20—Reaction abating.
Jan. 23—Eye in same condition as before serum was used. The usual routine injection of 500 units of antitoxin was given.
Jan. 25—A small white granular nodule forming in centre of cornea. Stains with fluorescein.
Jan. 27—Granule now about 3x4 millimetres, slightly raised.
Jan. 28—Granule now reaches to the limbus above; there is a characteristic salmon patch. Some excavation of granule just below salmon patch. Cornea bulging. Lids swollen. Conjunctiva swollen. Conjunctiva of upper fornix swollen so that it prolapses at outer canthus when upper lid is raised.
Jan. 30—No improvement. Cornea filled with large central whitish mass. Great injection of bulbar conjunctival vessels. Sclera beneath has bluish appearance.
Feb. 2—Slight improvement.
Feb. 16—Central whitish mass has almost disappeared. Eye quieting.
8. A. B. Female. 7 months. Meningitis. Calmette positive. Post-mortem shows tuberculosis of the bronchial glands and meninges.
9. C. D. Female. 2 years. Ascites. Calmette positive.

Negative Reaction—

1. P. 24. Retracted upper right lobe. Calmette negative.
2. K. 54. Fibrosis of left upper lung. Specific history. Negative.
3. T. 18. Mastitis, left. Had been treated with tuberculin. Negative.
4. Boy. 14 Typhoid followed by arthritis of hip. Negative.
5. K. 54. Arthritis of the knee. Negative.
6. C. D. A case of cured lupus erythematosus. Negative.
7. A. B. Empyema. Negative.
8. J. C. Female. 14 months. Suppuration in left orbit and necrosis of its inner wall. Negative.
9. W. A. 14 months. A large suppurating gland in neck. Negative.
10. L. S. 10 years. Empyema. Negative.
11. R. T. 7 years. Ankylosed elbow, acutely inflamed from recent injury. Negative.
12. Lorne H. 10 years. Subacute arthritis. Negative.
13. F. P. 10 years. Growth in chest wall and enlarged axillary glands. Negative.
14. J. D. 13 years. Superficial keratitis. Negative.
15. P. C. 13 years. Interstitial keratitis. Inherited syphilis. Negative.
16. L. G. 12 years. Interstitial keratitis. Inherited syphilis. Negative.

It has been assumed where the tubercle bacilli have settled in the body they secrete products of metabolism which unite with the receptors of adjacent cells and make these especially susceptible to the influence of fresh tubercle toxin, or, to put it in another way, excite in them an increased capacity to form antibodies. The same is true for injections of tuberculin. The tuberculin is especially attracted by these cells. They produce antibodies in great profusion, whereby especially leucocytes and lymphocytes are attracted, in order to render harmless the new toxin. This increased capacity to form antibodies was ascribed only to the cells which lie in proximity to the tuberculous focus, but the ophthalmo reaction has caused this theory to be modified. We must now suppose that ALL cells in the body of the tuberculous have an increased capacity to form antibodies. Hence the introduction of tubercular toxin causes a local inflammatory reaction at *any part*

of the body, whether there be present there a latent or an active tuberculous focus or not.

Kohler says, from trial with 175 known tuberculous patients, that 95 per cent. do react. Baldwin found 43 react, 1 failed (miliary tuberculosis), and 1 treated with tuberculin. Patients with miliary tuberculosis and those almost moribund do not react, neither do they to the subcutaneous injection, possibly because the system is overpowered with the toxin. Lenhartz found that in patients who had been treated by tuberculin injections, the Calmette reaction was always much less marked, and that the less tuberculin the patient had been given the more marked the reaction.

Calmette says that the eye acquires an increased susceptibility, so that a negative first test may be followed by a second positive reaction. Be that as it may, German clinicians do not rest satisfied with a negative reaction to a 1 per cent. solution. Only after two, three, and four per cent. solutions have failed of results are they content.

Lenhartz injected tuberculin in a number of those who gave the ophthalmo reaction, and established that they reacted in the characteristic way. An interesting fact noted by him was that a conjunctiva, which had become normal after the ophthalmo reaction had passed off, again was injected after the subcutaneous administration, bearing out Calmette's observation.

Baldwin of Saranac had shown those negative to the ophthalmo reaction do not react to even large subcutaneous doses of tuberculin.

Is it dangerous to the eye, or to the patient himself? It has been proven clinically that it is safe. It is true that Kalt has recorded a case of sclero keratitis and one of tubercular iritis seemingly made worse by it. Terrien records a tubercular conjunctivitis occurring in a child evidently tubercular, after the Calmette. Whether these were coincidences can never be decided.

Theoretically, it is impossible to see how a tuberculosis can be lighted up by it, for the tuberculin is obtained from the old original tuberculin of Koch. The old tuberculin, T.A., it is important to remember, is the FILTERED, concentrated, special bouillon in which the tubercle bacilli have been cultivated; in other words, the product of the metabolism of these bacilli, their toxin. The alcohol precipitates the albuminous bodies, and it is a solution of these which is instilled in the eye. How, then, can it possibly infect the eye or the body with tuberculosis, for it does not contain the bacilli? If it were made from the tuberculin R. or from the emulsion which contain ground-up bacilli as well as the toxin, there would be more weight in the objection.

Will the reaction tell us when a tuberculosis is healed, and relieve us from the examination for bacilli?

Baldwin of Saranac obtained the reaction in patients who *clinically* had recovered from tuberculosis and been healthy for periods of one to seventeen years.

May it aggravate a disease present in the eye tested, or in the other eye, whether that disease be tubercular or not?

The test should be made only in an eye free from conjunctivitis of any kind. Some observers say that trachoma is made worse by it; others deny this. That the concurrent hyperemia may aggravate, temporarily at any rate, an affection of the anterior structures of the eye—the cornea, iris, and sclera—seems reasonable, depending on the greater or less reaction produced. The deeper structures of the eye should escape. One observer found that, instilled in a sound eye, the other having been wounded, there was no reaction in either eye.

True found in a patient who had the bacilli and the tubercular choroiditis in one eye, the reaction was not more marked in the affected than in the sound eye, nor was the deep lesion aggravated by it.

Numbers of seemingly healthy people have reacted. It must not be forgotten that—

1. The reaction may occur from insignificant and easily curable forms of tuberculosis, *e.g.*, tubercular glands.
2. Post-mortem records show the great frequency of slight tubercular deposits which gave no clinical signs.
3. Systematic subcutaneous injections of tuberculin in healthy and suspected individuals have given positive reactions in from 50 to 60 per cent.

If the reaction is present, tuberculosis is present. It may be a laboratory rather than a clinical tuberculosis.

However exact and positive our methods of diagnosis, we must always be guided by that impalpable something we call clinical judgment or experience. Shall we make a hypochrondriac of a healthy man who, with some intercurrent disease, gives a positive reaction. Shall a positive reaction indicate active treatment? The practical and hygienic questions opened up by Calmette's reaction are too wide to enter into.

Is a negative reaction to Calmette sufficient proof of the absence of tuberculosis?

Experience has shown that one must not be satisfied with a negative reaction from a half or one per cent. solution. Stronger solutions, one to four per cent., should be tried before accepting a negative reaction. It is reasonable to suppose that this reaction will prove to be less delicate than others which will, no doubt, be discovered upon further knowledge of the blood changes of tuberculosis. Yet the ophthalmo reaction cannot well be improved upon for simplicity and ease of application. It has the further advantages that there is no rise of temperature and no constitutional disturbance. It has been shown to be trustworthy. Its

one weak point is that we cannot tell how great the reaction will be in any given patient, but neither can we tell with quinine or morphine. The suggestion has been made that a marked reaction possibly means great resistance of the patient to the disease.

Calmette's reaction will become a recognized clinical test for tuberculosis, but it will not cause the subcutaneous injection of tuberculin to disappear. A closer acquaintance with the tuberculin as a diagnostic agent will lead to its more frequent use therapeutically. The subcutaneous must remain the method of choice when both eyes are inflamed and tuberculosis is suspected. Morax prefers the subcutaneous injection to the ophthalmo reaction, because the local ocular reaction added to the pyrexia shows that there is a tubercular focus not only in the body, but in the visual apparatus as well.

Medicine.

IN CHARGE OF
J. J. CASSIDY, M.D., W. J. WILSON, M.D.,
AND J. H. ELLIOTT, M.D.

TUBERCULOSIS IN THE NAVAL AND MILITARY FORCES OF THE EMPIRE.

THE January number of the *British Journal of Tuberculosis* is principally devoted to a discussion of this subject. It is satisfactory to note that in the navy the incidence of the disease is less than amongst males of the civil population at the same age, while in the army it has about the same incidence.

This is contrasted with conditions existing forty years ago when the services showed a greater number of deaths from tuberculosis than the civil population.

This change is ascribed to the great improvement which has taken place in the hygiene of both navy and army. In the navy the death rate has fallen from over 2 per 1,000 strength in 1860 to about 0.5 per 1,000 in 1906, and the invaliding rate from over 6 to about 2 for the same years. In the army there has been a corresponding decrease, the death rate per 1,000 strength in the sixties being 2.5, compared with 0.5 during the past four years. The invaliding rate has fallen in the forty years from 4 per 1,000 strength to 1.5.

The death rate in the army has thus fallen about 80 per cent. In the civil population the death rate has fallen in forty years from 3.5 per 1,000 to 1.5 per 1,000 (males 15 to 35 years of age), a decrease of over fifty per cent. This is much less than the decrease in the army, where the marked improvement must be attributed to bettered surroundings during the above period. A Royal Commission to inquire into the sanitary condition of all barracks and hospitals in the United Kingdom reported in 1860 many barracks with living and sleeping room with less than 250 cubic feet per man—practically all had less than 500 cubic feet per man. They also reported "that in 83 barracks of the United Kingdom, containing 3,130 rooms and 42,521 men, with from 200, 400, 500 and in very few rooms only 600 cubic feet per man, no means of ventilation had been provided," and in 78 barracks with 230 cubic feet per man and upwards, ventilating arrangements, showing all stages of imperfections and inefficiency, had been introduced. Since then much has been done, and the universal rule now is 600 cubic feet of space in barracks for every soldier.

Improvements in clothing, better diet, increased temperance,

have had some effect, but the improved housing has been the great factor.

In the Indian service there has been a steady decrease of tuberculosis in European troops, the admissions to hospital falling from 6.4 per 1,000 in 1885 to 2.1 in 1905; on the other hand the native troops show an increasing incidence, the hospital admissions having noticeably increased during the 20 years. There is a great difference in the admissions from the several races comparing the native forces, as shown by the following table:

Gurkhas, 7.3; Rajputs, 6.63; Dogras, 5.94; Vats, 3.7; Hindustani Mussulmans, 3.45; Hindustani Rajputs, 2.75; Other Caste Man, 1.9; Sikhs, 1.78; Punjabi Mussulmans, 1.7; Brahmins, 1.6; Muharattas, 1.5.

One of the most striking facts brought out is that the Gurkhas which head the list are flesh eaters and of rather dirty habits, while the Brahmins, showing such a low incidence, are high class Hindus. They are supposed to be the cleanest race in India, are pure vegetarians, never eat meat of any kind and do not indulge in tobacco or alcohol. The Muharattas, too, are cleanly and usually conform to strict Hindu habits.

As to the relative prevalence of tuberculous disease in the various armies of the Great Powers, the French Army gives by far the highest ratio of admissions, the Austria, Hungarian and German the lowest, while the armies of England and Russia occupy about a middle place. In the British and American Armies the conditions of service are comparable and racial difference negligible. The death rate in the American Army in 1905 was 0.86 per 1,000, compared with 0.31 for the British Army for the same year. In the American Army in 1897 the rate was but 0.33 per 1,000; since then it has been steadily increasing. The invaliding rate for 1905 was 3.67 in the American Army, compared with 1.56 in the British Army. J. H. E.

Proceedings of Societies.

EX-HOUSE OFFICERS' CLINICAL MEETING.

THE following cases were shown at the November meeting of the ex-house officers of the Toronto General Hospital, by Dr. H. A. Bruce:

1.—W. G.

Family History—Negative: one brother died of diabetes mellitus.

Personal History—Age 37; born in Canada; occupation, that of a brakeman on railroad; had diseases of childhood, otherwise no serious illness; for last three months has had considerable pain in the right leg, which has been spasmodic, and would shoot up the right side.

Present Illness—On November 17th, about 10 a.m., he felt a severe pain on the right side of the abdomen, shooting up towards the epigastrium. An hour later this pain localized to a spot near McBurney's point, which was very tender to the touch. The pain and soreness remained about the same—less if anything—for a week. It was always increased on drinking or eating anything. His bowels had been regular, but constipation set in with the onset of this pain. An enema, however, would be quite effectual. On November 18th, during the afternoon, he began to vomit, and continued to do so for 24 hours. At end of first week he noticed a mass in the right iliac region, about the size of one's fist, hard, and exceedingly tender to touch.

Local Condition—Large mass felt on the right side in appendiceal region; right rectus was quite tense. White blood corpuscles, 20,400.

Op., Nov. 28th—Incision through the right rectus, as this was over the mass. As soon as peritoneum was cut a large quantity of foul pus came out. All the pus was wiped out and careful search was made for the appendix. This was found to be macerated, but was removed quite readily. Cigarette drain and some gauze used.

November 30th—Gauze removed. Temperature, 99 2-5; pulse, 80; feeling comfortable.

December 2nd—Temperature, 98 2-5; pulse, 84; all drainage removed and a narrow strip of gauze inserted.

December 5th—Patient feeling quite well; very little discharge.

December 12th—All gauze left out.
December 15th—Patient up and walking about.
December 19th—Patient discharged; wound healed perfectly.

2.—A. D.

Family and Personal History—Negative.

Present Illness—On Sunday, November 11th, patient complained of a sore throat, and was treated for such. On the morning of the 12th the throat was better, but patient had pain all over the abdomen, and also marked tenderness. Condition remained the same until 17th, when the pain became more intense. Then the surgeon was called in. Bowels were constipated, purgatives only being effectual. Patient was sent in for operation at once.

Operation—Battle's incision was made. There were a lot of adhesions around the cecum walling off the general cavity, but about 3 pints of pus came from the right iliac fossa. The appendix was found to be adherent to the rectum. Pus cavity was cleaned out and rubber drainage tube and gauze were used as drains; remaining portion of wound was closed with silk-worm gut stitches interrupted. On the fifth day all the gauze and tubing was removed and cavity syringed out. Small piece of tubing was inserted, and wound kept clean.

Wound healed up steadily, and patient was discharged on December 23rd, with wound quite healed.

3.—W. B.—Came in complaining of pain in right side of abdomen. It began high up, near the costal margin, about seven weeks ago. Vomited for about first 24 hours. Then became very tender, and pain became more severe. Was admitted to St. Michael's Hospital, when abdomen became distended, tense, and hard, and some swelling or tumescence on right side. Remained in hospital for three weeks; only a slight soreness remaining. This remained for another three weeks, when he came to T. G. H. for operation. Found a mass to right and a little above the umbilicus. Walled off the peritoneal cavity with gauze and found pus below and behind the gall-bladder. The apex of the appendix lay in the abscess, and was perforated. It was very large and inflamed, and was removed by clamp and stump inverted, and buried by purse-string method. When wiping out the abscess cavity, two faceted gall-stones were found. A stab wound was made above the crest of the ilium for purposes of drainage, and the anterior wound closed with "through and through" silk-worm gut sutures.

4.—E. S.

Family History—Father and mother l. and w.; mother is a very nervous woman; 1 s. l. w.; no history of tubercular disease or carcinoma in family.

Personal History—Age 22; was a strong, robust girl till two years ago, when she began to fail in weight to a slight extent;

she has been in the hospital on nine different occasions for operations, which have amounted to 18 in all.

In October, 1900, she had a finger amputated at the interphalangeal joint for Raynaud's disease, then at the metacarpophalangeal joint. Then at various intervals a finger and toe would be amputated as each became affected. She could always tell when the part would be affected, as it would get numb, then swell and get blue. It would then blanche out and become gangrenous all inside one week. The toes on both feet are gone, as well as all the fingers (except the great one) on the left hand, and the middle finger of the right hand.

In March, 1908, the middle finger was amputated, and at that time there was a patch of necrosis on each knee—on its under surface. The patches were quite superficial, the upper layers of the skin only being affected. Moist dressings were applied and parts healed up, and patient was sent home. Bowels at the time were constipated, urine normal.

On July 15th, 1908, she was admitted again, as the dorsum of the right foot had become gangrenous. These patches are quite typical, and in about one week a symmetrical patch will be noticed on the opposite leg. She notices the part to be affected gets numb, and in about 24 hours it blanches out, and then in the centre a red spot appears, and a fine red line marks it boundaries. This process usually takes 48 hours, and it then gets black, and all sensation in skin is lost. The skin sloughs off, and in about three or four weeks that area heals. These areas are oblong in shape, being usually about 4 inches long and 2 inches wide. From then till now fresh patches have broken out, till all the left leg below the knee has been affected, and all the right leg below the knee excepting the posterior surface. The plantar surfaces of feet have not been affected. These areas break down again, and each time the ulceration goes deeper. The left leg has ulcerated four times, the right leg once. She cannot keep the legs in any position other than the horizontal on account of the pain being increased. Her nutrition remains good, and she is exceptionally bright. Her bowels have been very constipated, requiring mag. sulph. and enemata frequently.

From September 7th till October 3rd, her bowels did not move at all. Although she had castor oil, purgen tabs., jalap, pil. cath. co., four at a time, and croton oil, still nothing was effectual. Besides all these, she had several enemata. She does not sleep well, and appetite is very poor, yet she does not seem to lose weight to any marked degree. Her temperature began to vary from 98 degrees to 102 degrees and 103 degrees, and as she was distended to a great extent, an operation was decided on. Abdomen was opened and small and large bowel were irrigated. Strange to say, there was very little residue in bowel, but what there was, was very hard.

Operation was on the morning of the 3rd. She became distended on the 5th, and a high turp. enema was given. A large quantity of flatus was expelled, as well as a distinct watery movement. Then, at noon, the bowels moved again, and this time there was a large quantity of fecal matter. This was not the result of a purgative or enema.

On 8th, had a free motion, as result of an enema.

11th—Bowels moved with enema; very free movement.

20th—Bowels are moving slightly.

Nov. 20th—Bowels have not moved since October 20th, although lots of purgatives and enemata were given. Does not sleep well or eat much; ulcers breaking out above both knees.

Nov. 23—Another spot on right thigh.

Nov. 25—Condition much the same; bowels not moved yet; patient very nauseated; vomits all nourishment.

Nov. 27—Patient feels much better. Last night she passed urine, the first time for a week.

Dec. 1—Had voluntary passage of urine, 1 1-2 oz., to-day. Morphine sulphate has been increased gr. 1-8 for one dose during the night. Another area on left thigh.

Dec. 3—Bowels not yet moved, but patient feels slightly better.

A. D.—Age 16. Since 8 years of age has had recurrent attacks of pain in left lumbar region, especially this last three years; marked soreness this last two months. Pain is of a sharp cutting character, increased on moving, decreased on lying down. Does not disturb micturition. X-ray shows calculus about 1 1-2 inches down from junction of last rib with vertebræ and immediately below the 12th. Incision made in lumbar region, kidney exposed and carefully raised. Calculus felt in pelvis of kidney. A stab incision was made in vertex of kidney at junction of lower and middle thirds, and came down directly on stone, which was being held in other hand. Profuse bleeding of kidney; finger passed in with a scoop and stone extracted. Kidney sutured with catgut. Muscles and skin, silk-worm gut, and horsehair for skin. No drain.

J. McG.—Age 39. He often did not feel well after breakfast for about two years; had soreness over abdomen, and as day advanced would become localized to McBurney's point; no pain; constipated; castor oil relieved symptoms each time until two months ago, and was laid up for eight days; slight recurrence about a week ago, and decided to have operation. Battle's incision; appendix found adherent to surrounding parts; wide bands of adhesions about the bowel; appendix removed; incision closed without drain.

E. L.—Complaint: Dull pain in stomach and belching of gas about three hours after meals. Duration: about 15 years.

Family History—Nothing important.

Personal History, Previous Illnesses, etc.—Nothing important.

Present Illness.—About 15 years ago began to notice pain and distress about three hours after meals; noticed it more in winter than in summer; got relief if could raise the gas or eat something; used to carry a piece of bread in pocket to eat when pain came on. About four years ago the attack was accompanied by vomiting of dark, almost black, material; stools were black; has not vomited since, but stools are often black at times; his appearance became pale and blanched; no particular yellow tint; has not lost weight; no night-sweats; usually constipated after an attack; no tenderness after pain was gone.

Local Examination—No mass to be felt; stomach's greater curvature about 1 inch above the umbilicus; liver and spleen, not enlarged.

Operation—Opened in epigastric region to left of middle line and a gastro-enterostomy performed; had some hemorrhages after operation for a couple of days, but soon began to improve, and made a good recovery. Patient weighs about the same now, but is feeling well, and looks well to-night.

The Canadian Journal of Medicine and Surgery

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Editorials.

MAGNESIUM SULPHATE IN TETANUS.

BLAKE reports (*Surg., Gyn., and Obst.*, 1906, No. 5) a case of tetanus, in which recovery followed the use of five subdural injections of magnesium sulphate during the course of ten days. The strength of the solution employed varied from 25 per cent. to 12.5 per cent. The former strength was only used on the first occasion, when 67 minims were injected; at the other times

2 drams of the weaker solution were used. In a second case the patient died, but, even here, the magnesium sulphate injections had a marked action on the symptoms. Blake claims that these injections conserve strength, as they prevent convulsions and pain. Hence, as a result, excessive metabolism and production of heat are avoided. Owing to the relaxation of the muscles of mastication, the patient can be nourished by the mouth. The action of the medicine is prolonged (twenty-nine to thirty-seven hours), and the heart is not depressed by it, the only bad effect, even of repeated injections, being inability to empty the bladder. Blake thinks that magnesium sulphate does not exercise any special action on the tetanus germ, and that it is merely a good form of symptomatic treatment.

Meltzen, who alludes to Blake's successful case (*Med. Record*, December 16, 1905), points out that the danger from magnesium sulphate anesthesia will come practically only from interference with respiration, as the heart and pulse remain unaffected. This will necessitate that hospitals in which the intraspinous method of giving magnesium sulphate is tried in tetanus, will require a suitable apparatus for artificial respiration, the ordinary clinical methods being absolutely insufficient for emergency cases.

Dr. H. Greeley, Brooklyn, N.Y., reports (*Journal of the American Medical Association*, Vol. xlix., No. 11) the successful employment of magnesium sulphate by hypodermoclysis in two cases of tetanus. In the first case, a boy of two years of age, tetanus antitoxin in large doses had been given; chloral hydrate, potassium bromide, apomorphin, morphin, had also been given, but unavailingly. A pint of distilled water, containing two drams of magnesium sulphate, was introduced, by hypodermoclysis, under the skin of the child's abdomen. The injection was given slowly, almost an hour being consumed in the operation. Within thirty minutes afterwards a marked amelioration of all the symptoms was noted, and continued, until, within an hour, the child fell asleep with nearly a total relaxation of the affected muscles. Cyanosis disappeared, even the jaws were loosened, and the pulse, which, before the injection, had become rapid and feeble, returned to an almost normal condition. The patient perspired profusely; his urine increased in quantity, and was passed in the bedding, staining it yellow.

A second injection of magnesium sulphate was given on the following day. Afterwards, the patient's condition improved still further, no tendency to relapse appearing, and complete recovery took place.

Dr. Greeley reports a second case of tetanus, treated with magnesium sulphate, the patient being a man of 45 years of age. The second patient received an injection, by hypodermoclysis, under the skin of the abdomen, of a solution of three drams of magnesium sulphate dissolved in a pint of water. The patient was also instructed to drink a dram of magnesium sulphate dissolved in water, three times a day. All symptoms of tetanus disappeared in twelve hours, and the patient recovered. Dr. Greeley, kindly replying to queries about these cases, says: "I did not attempt to find the bacillus of tetanus in the cases mentioned; but, in the first, at least, there can be no doubt that the diagnosis of tetanus was exact, as clinical manifestations were so marked. As for preferring hypodermoclysis to intraspinal injection, I think that the former method reaches the central nervous system more generally and surely, through the circulation, than is possible through the spinal canal. Also that almost any quantity can be repeatedly administered without the dangers of the latter."

It may be mentioned, incidentally, that Dr. Calcaterra (*Gazzetta degli Ospedali*, Milan, xxviii., Nos. 85-89, pp. 882-928) has obtained good results in preventing the convulsive seizures of epilepsy by the hypodermic use of magnesium sulphate and magnesium chloride. He explains the curative action of the magnesium salts, as follows: "(1) A direct action of the magnesium ions on the abnormally functioning nerve element; (2) removal of toxins from the blood serum, which renders it normal, and perhaps also exercises a similar effect on the organic fluids generally." Defective elimination through the kidneys of the poisons generated by the tetanus bacillus exercises a disastrous effect on the organism of the patient. Dr. Hughes says ("Practice of Medicine," p. 82), "In four post-mortem examinations of cases dying from tetanus at the Philadelphia Hospital, marked chronic nephritis was observed. Probably the future may show some connection between nephritis and tetanus, by which the specific poison is not eliminated, as it might be were the kidneys normal."

Dr. Greeley's cases, alluded to in this article, would seem to

show that the use of magnesium salts, by hypodermoclysis, in cases of tetanus, increases diaphoresis and diuresis, while, at the same time, the magnesium ions exercise an analgesic effect on the abnormally functioning nerve centres. J. J. C.

WHY SO MUCH "SOB COPY"?

That charity is needed by little children and women this trying winter is true. There is, however, too much nauseating detail and far too much sentimental gush over the "dying babies." The Nurses in our Missions are overworked, and tired to death, and all because the Government have let immigrants, ignorant people with swarms of children, born in dirt and want in other lands, crowd into Canada and stay in our cities, as stay they will. Only the young and strong, both men and women, the men with through tickets to our Great Northwest, should be brought here, untrammeled with families, and on the understanding that they would proceed at once to where they are undoubtedly wanted, and help in tilling the soil of New Ontario and Manitoba. Let them become Canadianized first, then marry, in which case there will be far fewer unhealthy infants and less demand for charity in this fair land of ours. To avoid the detaining glamor of the cities, all immigrants' tickets should be without "stop-over privileges," it having undoubtedly been due to neglect on this point that the principal cities of Canada have this winter become overcrowded with a class, not only unfit to withstand our cold, but without the necessary means to support themselves owing to there not being work for everyone. If such people would but realize that there is work for one and all if they would proceed to the West, their condition of want and distress would be at once changed to one of comfort and contentment. A Settlement worker in New York "set up" a family who were shiftless and numerous in a home in the country and gave them "a start." Next winter she found them back again, depending upon the same charity as before. When asked the reason why, the mother of the brood remarked that they liked the city best, and that they really preferred "folks to stumps." It is certainly time that our Immigration Department at Ottawa took this subject seriously to heart and stopped this wholesale immigration from the slums of London and elsewhere of, in very many in-

stances, people who, though in want, will not work even if work be given them.

Though hardly within the province of a medical journal, we think it is but fair to say that physicians in our large cities have been doing their share to relieve the need that has been so prevalent, there being very few medical men who have not always been and will be more than willing to answer any call to visit, entirely without remuneration, the deserving poor.

The perfect emigrant should be
A stalwart chap of six foot three,
Filled with determination grim,
And wholly sound in wind and limb.
He should not ever be afraid
To turn his hand to any trade,
And he should further own a skill
In each commensurate with his will.

Moreover, he should simply yearn
Not to instruct, but just to learn,
He should not put on British airs
Or "side" about his home affairs.
He should be confident, and yet
As modest as the violet.
Given these traits, he, more or less,
May hope to meet with some success.

W. A. Y.

PHYSICIANS AS CARRIERS OF CONTAGION.

Dr. J. Hericourt, in a communication published in *La Révue*, Paris, accuses physicians of being the most dangerous carriers of disease in modern life. French physicians, in his opinion, are exceedingly careless in their comings and goings, and must be responsible for the dissemination of many infectious diseases. For instance, he says, the man beside you in a street car or theatre may be a doctor, fresh from a scarlet fever patient. He thinks a doctor should enter the room of a patient sick with an infectious disease only after changing his street dress for a complete suit made of some material which can be easily washed and boiled, and which after disrobing should be left at the house of the patient. After removing these garments, the doctor should thoroughly disinfect his head, face, neck, and hands before resuming his street dress. "The doctor should keep his hair cut close and wear no beard. His consulting room should not be in his house, should be constructed like an operating room, and kept as scientifically clean." Although,

to the laity Dr. Héricourt's recommendations may be "counsels of perfection," to physicians who aim at perfection in the practice of their art, they are not of the negligible sort. In fact, why should not physicians place the practice of medicine on the same high level as the practice of operative surgery? A surgeon prepares antiseptically his own person, the instruments and dressings used, the body of the patient, and all that is near to it, in order to prevent, as far as possible, the access of microbes to the field of operation. A physician, on leaving the room of a patient sick with an infectious disease, should remove the attire he has worn there, and disinfect the exposed parts of his person, so as to prevent the diffusion of pathogenic germs from himself to others.

Dr. Héricourt's teaching is rather severe on physicians. If it were generally accepted as true, the entrance of a gentleman carrying a professional satchel into a street car would be little short of a calamity; while, if a doctor were to be seen at a theatre, or a church perhaps, seats in his neighborhood would be speedily vacated. Physicians know that, though they are sometimes exposed to scarlet fever, they generally escape its attacks. Age is the most important predisposing factor; 90 per cent. of the fatal cases of scarlet fever are under the tenth year. Many persons escape it altogether: we have attended a patient of seventy who had it for the first time. Seibert, who studied scarlet fever in New York, associated the remarkable drop in that disease in July, August, and September with the closure of the schools and the cessation of the daily congregation of infectious material in small areas—schoolhouses and playgrounds—for so many hours each day.

Then, scarlet fever is very rarely communicated by a third person. Referring to that feature in the infectivity of scarlet fever, Dr. Osler says ("Practice of Medicine," p. 131): "I recall one instance in which I could have been the only possible medium of infection. In a collective investigation on this point among physicians in the State of Connecticut, Loveland had 100 negative and 10 positive replies."

As these statistics show that scarlet fever is occasionally communicated by a third person, they give an air of reasonableness to Dr. Héricourt's teaching. Let us, therefore, accept his advice with a good grace, and, when we next treat a case of scarlet fever or diphtheria, let us wear a suit of white duck and a skull cap when in

the sick-room. Of course, it must be remembered that a separate suit of duck should be worn at each house where such an infectious disease is treated.

As it is the fashion nowadays to have the hair cut close, doctors and patients are pretty much alike. If a beard and moustache are kept in an antiseptic condition, they will not be a source of infection; perhaps it is safer to shave them off.

There is a good deal to be said for Dr. Héricourt's view that "the doctor's consulting room should be apart from his house, and should be constructed like an operating room and kept as scientifically clean." A list of the cases of infectious diseases which pollute the air and soil the furniture in a doctor's office during a month or two would not be reassuring to his callers. Some of the infections are dangerous. We once met a case of virulent smallpox, an unvaccinated man, who had been waiting in our office for over two hours. All sorts of people, clean and unclean, those beginning to sicken with infectious diseases and others who have them well developed, occupy the office night, noon and morning. If there is a room in a town where disinfection is called for, it is the office of a doctor with a large practice. Hence we cordially endorse Dr. Héricourt's advice, that the doctor's office should be so made that it can be kept "as scientifically clean as an operating room." J. J. C.

THE CURATIVE EFFECTS OF A SPECIAL DIET ON MUCOUS COLITIS.

Mucous colitis has been known for centuries. The presence of mucus in small amount in the feces is of no consequence; it is usual in constipation. When in quantity, and intimately mixed with the feces, it indicates catarrh of the small intestines. When in isolated masses, it signifies catarrh of the large bowel. In membranous or mucous colitis, long cylinders of mucus are passed, sometimes without much feces. These cylinders are generally swarming with B. coli, which infest the colon. It is a secretion neurosis of the large intestine, and is met with particularly in nervous and hysterical patients. Osler says ("Practice of Medicine," p. 531): "The treatment of mucous colitis is very unsatisfactory. Drugs are of doubtful benefit. . . . The coarser kinds of

food should be eaten, everything which leaves a bulky residue. Plenty of butter, fat, and oil should be taken with salads, etc. But this is too often the very sort of diet that these nervous women cannot take. Right inguinal colotomy has been performed with success in several cases of great obstinacy. The artificial anus should remain open for some time.'' Referring to this last point, Savill says (''A System of Clinical Medicine,'' vol. 1, p. 402): ''The artificial anus is kept open for twelve months or more, during which time the cecum and colon are thoroughly irrigated, and finally the opening may be closed.''

At a meeting of the Surgical Section of the Royal Academy of Medicine, in Ireland, at Dublin (see *British Medical Journal*, December 14, 1907, p. 1713), Mr. Seton Pringle exhibited a case of mucous colitis, in which he had performed appendicostomy for the purpose of providing more thoroughly for the washing out of the large bowel. The patient, a strong laborer, with no symptoms of neurosis, had for two years passed motions consisting of cylinders of mucus. Medical treatment and diet having proved unavailing, appendicostomy was performed in June, 1907. Subsequently the patient had washed out his own colon daily with argyrol 1 in 1000 in the morning and normal saline solution at night; but the diseased condition was in no way ameliorated, and the treatment was regarded as a failure. On examination of the bowel with the electro-sigmoidoscope no gross lesion had been found, so that it was regarded as a true case of mucous colitis. The treatment of this case, after appendicostomy, had lasted about six months.

Dr. Carl von Noorden, who has written a treatise on ''Membranous Catarrh of the Intestines'' (colica mucosa), contends that this disease occurs almost exclusively in constipated subjects. Chronic constipation alone does not produce it; there must be, besides, irritability and over-activity of the mucus-secreting glands of the colon. This condition occurs in persons of a neurasthenic or hysterical predisposition.

Such patients do not thrive in high altitudes, nor at sea level, and they show a greater tendency to relapse if they go to such localities. They should live at a moderate altitude in a wooded country, and in a place where they can enjoy walks of moderate length, that do not overtax their strength.

The important items in the diet recommended for them are cream, butter, and Graham bread. The daily average of cream allowed amounted to 5 oz. 127 1/2 gr. The daily average of butter amounted to 8 oz. 49 1/2 gr. About two-thirds of this quantity were eaten as pure butter, with bread, potato, or vegetables and fish. The other third was taken cooked with the food. The average quantity of Graham bread was 7 oz. 24 gr. to 8 oz. 358 gr. Soup made from legumes boiled with bacon was allowed, also meat, vegetables, such as boiled or baked potatoes, fruits with coarse skins and large seeds, as currants, gooseberries, cranberries, or grapes. At 4 p.m. the patients took a walk lasting one and a half to two hours. During the first few days the patients passed most of the time in bed. On the first and third days of the treatment, in order to prevent any disturbance that might arise an oil clystor is given. Later on this is very rarely repeated. Hot compresses are applied to the abdomen or suppositories of gr. 3/4 belladonna are employed. Dr. Von Noorden says that if a case takes a normal course the pathological secretion of mucus does not continue once a week; in at least half the cases he treated, mucus ceased to appear in the stools, and did not return as soon as soft alvine motions began to appear. Von Noorden claims complete success for the treatment in 79 per cent. of the cases, incomplete success in 15.8 per cent., permanent success in 50 per cent., relapses in 13.1 per cent., unknown in 15.8 per cent., failure in 5.2 per cent.

A careful study of Von Noorden's treatise on colica mucosa will satisfy the reader that the dietetic treatment of colica mucosa yields the best results. J. J. C.

DRINK TO ME ONLY WITH —— ?

"Little drops of water, little grains of sand," other trifles and bits of bric-a-brac, such as samples of diving suits, etc., continue to compose the *aqua pura* that the citizens of Toronto drink, baptize, and bless themselves with. Just now the teetotalers are unusually busy about reducing the consumption of liquor in Toronto. If their enthusiasm were first directed against the present water supply and the surprise of pure water to drink became a reality, even the

oldest "toper" might "pledge a health" in water pure just to see what it tastes like. On the terrors of drinking the present city water the Academy of Medicine has spoken, the people have fumed, the daily press have writ it large in scare type, and the great National Council of Women have babbled like the little brook and tried to beguile the City Council into promises, but the Council have bowed them out, wishing them the compliments of the season.

Well, what is going to be done about it, that's the question, and who is going to do it? Answer echoes, Who? W. A. Y.

EDITORIAL NOTES.

Bulletin No. 142, Milk.—Bulletin No. 142, Milk, Inland Revenue Department, Ottawa, affords very interesting reading to those who take an interest in the quality of milk, which enters so largely into the food of people in health, and forms the almost exclusive food of infants and invalids. It gives Toronto a black eye, and this may be the reason why the findings of this bulletin have received but little notice in the Toronto papers. Of the 15 samples of milk purchased at Toronto, July, 1907, and analyzed, not one reached the standard set by the late chief analyst, Mr. Macfarlane—3.5 per cent. fat, 8.5 per cent. solids not fat; total solids, 12 per cent. The remarks, uncomplimentary, but unanswerable, made by the analyst on the Toronto samples of milk are as follows:

Sample 33281—Genuine; under average in fat.
" 33282—Genuine; under average in fat.
" 33283—Watered.
" 33284—Partly skimmed.
" 33285—Genuine; below average in fat.
" 33286—Watered.
" 33287—Partly skimmed.
" 33288—Watered.
" 33289—Partly skimmed.
" 33290—Doubtful; probably skimmed.
" 33291—Watered.
" 33292—Partly skimmed.
" 33293—Partly skimmed.
" 33294—Partly skimmed.
" 33295—Watered.

In Toronto the by-law to license and regulate milk vendors requires that milk sold shall contain 3 per cent. fat and 12 per cent. total solids. Applying this Toronto standard, nine of the fifteen samples referred to were deficient in fat; fifteen

were deficient in total solids. Evidently the city milk by-law was not enforced in Toronto last July. It appears that the Toronto milk producers are unable to supply a milk containing 3.5 per cent. fat, and they say that the fault lies in their poor herds. Dr. Ellis, Public Analyst, Toronto, has recorded his opinion that it is impossible to assert that a milk has been adulterated with water, if the solids not fat exceed 8 per cent.; or that it has been skimmed if the fat exceeds 2.5 per cent. Commenting on Dr. Ellis' dictum, A. McGill, Chief Analyst, Ottawa, says: "This opinion is certainly justified, if certain herds in the Toronto district may be included among normal milk producers." That they are poor herds is evidently his opinion, for he adds: "That the low quality of milk now produced in certain districts could be raised to the proposed standard quality (3.5 per cent. fat, total solids 12 per cent.), by proper care on the part of dairymen, goes without saying. The natural incentive to needed improvement is quite evidently that the cities and towns purchasing such milk should insist upon their supplies having a fixed minimum value in fat and total solids. The local authorities must, of course, be charged with the responsibility of seeing that such enactments are enforced." The Toronto local health authorities should be compelled to enforce a reasonable milk by-law. The results of the analyses of milk sold in this city last July, which are vouched for by scientific authorities of high rank, show that at that time the Toronto milk by-law was disregarded.

The Etiology of Alopecia.—In a lecture on "Complete Alopecia," published in *The Medical Brief*, February, p. 72, Dr. Shoemaker, Philadelphia, mentions a number of the more prominent causes of alopecia. Heredity plays an important part, many persons inheriting poorly developed hair from their ancestors. Premature alopecia occurs more commonly in men, as women pay considerable attention to their hair, and likewise have a larger quantity of subcutaneous fat than men. An improper diet, deficient in easily digestible proteids, such as meat, eggs, and milk, is a cause of premature loss of hair in children, youths, and young adults. A deranged condition of the nervous system, Dr. Shoemaker says, is productive of alopecia, nervous derangement having been marked in the case he exhibited. He does not allude to syphilis, infectious fevers, seborrhea, eczema, parasitic diseases of

the skin, etc., among the causes of alopecia universalis. Irritation of the scalp from the use of a stiff brush, a sharp comb, dust, or other foreign material, frequent shampooing with strong soaps, dyeing of the hair, and close cutting of the hair, he mentions as the chief local causes of alopecia.

The Treatment of the Initial Lesion of Syphilis.—The initial lesion of syphilis should not be cauterized, unless it should be attacked by phagedena—cauterization irritates an otherwise simple ulceration and retards its healing. A dry dressing—calomel, 1 part; iodoform, 2 parts—answers well, or a weak solution of carbolic acid applied on lint or cotton three times a day will serve. Nowadays this practice is being reversed. Jacobson, Neisser, Joseph, Finger, and Hollander advocate the excision of the initial lesion or its destruction by the Hollander hot-air treatment. Jacobson says that he has saved at least ten per cent. of his patients from developing syphilis by an early destruction of the primary lesion. Finger reports a case in which the spirocheta pallida was found, the lesion excised, and no secondary symptoms appeared in a year. After reading such reports one feels like asking about the state of the inguinal glands of these patients. If, with the presence of the initial lesion, the glands in the patients' groins were simultaneously enlarged, perfectly distinct from one another, rolling under the skin freely and easily; if these glands were painless when handled, and not fused together, nor with the surrounding tissues, should they also have been excised, as well as the primary sore? The primary sore appears late after syphilitic infection; the period is variable, but an average of 21 days is allowed; the limits recognized are: Maximum 98 days, minimum 10 (Sturgis). Certainly, if the inguinal glands of a patient, the bearer of a primary sore, are enlarged, the excision of the primary sore would not prevent syphilitic infection.

The Prevention of Syphilis.—The practitioner is occasionally asked how the danger of syphilitic contagion may be obviated. There are, perhaps, some who would refuse to answer the question or who would reply in the words of John Sintelaer: "The only preservative against catching the venereal is to keep the finger out of the red-hot frying-pan." Professor Metchnikoff, Pasteur Institute, Paris, gives the sanction of his name to a calomel ointment

which he recommends as a preventive of syphilis. The formula of this ointment is—33 grains of calomel to 67 grains of lanolin and 10 grains of vaselin. It is efficacious, only when employed during the first few hours after contact with syphilitic virus, and it is useless to apply it in cases which first come under observation some days later. Professor Metchnikoff and his colleagues have been endeavoring to find an alternative treatment suitable for the late cases, and they think favorably of atoxyl, an arsenical preparation, which has been used successfully by P. Koch and others in the treatment of sleeping sickness. Experiments have shown, that a monkey inoculated with syphilitic virus and subsequently treated by the subcutaneous injection of atoxyl, does not develop syphilis. It is stated, that a single injection of atoxyl into a monkey, delayed until the fifteenth day after the inoculation of the syphilitic virus, prevented syphilitic infection. The dose of atoxyl necessary to produce the preventive effect on man is not settled. In two observations made on men by Professor Metchnikoff and Dr. Salmon, Paris, two injections of atoxyl, 50cg. each, were given, at an interval of two days. No signs of poisoning or intolerance were observed. No signs of syphilis supervened, but, as it was not known whether infection had really occurred in these cases or not, no conclusions as to the preventive effect of atoxyl on syphilis could be based on them.

Bad Effects of Quinine in Gonorrhea.—Undoubtedly the principal use of quinine is in the treatment of malarial diseases. When we realize that quinine, 1 part to water 20,000 parts, is sometimes destructive of the plasmodium malariæ, its efficiency as an anti-malarial agent is readily understood. But its very efficiency in destroying the plasmodium malariæ inhibits employment in the diseases caused by the gonococcus. A patient who has either acute or chronic gonorrhea, and at the same time requires the use of quinine for malaria, is in a very awkward position. Livermore calls attention to this difficulty in the *American Journal of Dermatology and Genito-Urinary Diseases,* August, 1907, and he claims that, if quinine is given for any length of time to a patient with gonorrhea, it will render the later disease incurable. He treated five cases that developed malaria while under treatment for gonorrhea, and each of them more than convinced him of the truth of the above statement. His explanation of the untoward action of

quinine in gonorrhea is that, in all probability, quinine acts on the leucocytes in such a way as to allow the gonococci to penetrate deeply into the tissues, and that their complete eradication is made very difficult. This explanation seems reasonable enough. Writing of the effects of quinine on the circulatory system, Butler says: "Quinine in a remarkable manner affects the constituents of the blood. The ameboid movements of the white blood-corpuscles are arrested, preventing their migration through the capillary walls in inflammation, while their number is diminished by full doses of the drug, both in health and in inflammatory conditions." A reduction in the number of the effective combatants, the leucocytes, with great slowing in their movements, would seem to explain, to a certain extent, the untoward action of quinine in gonorrhea.

J. J. C.

PERSONALS.

Dr. George Elliott, General Secretary of the Canadian Medical Association, has been appointed Provincial Medical Examiner for the Royal Arcanum in Ontario.

We have received a handsome illustrated programme of European travel, Naples to Norway. Free copies will be sent on application to F. Withrow, B.A., Toronto.

Dr. Hugh H. Young, Baltimore, will give a paper on "Remarks on the Operative Treatment for Various Diseases of the Prostate" on Tuesday, March 3rd, 1908, before the Academy of Medicine.

Dr. D. J. Gibb Wishart, Associate Professor of Laryngology and Rhinology in the University of Toronto, leaves early in March for Italy, where he intends to follow the clinics of Professor Massei and others in Naples, Rome, and Turin. Subsequently he will attend the International Laryngo-Rhinological Congress in Vienna in Easter week, which is being held to commemorate the fiftieth anniversary of the establishment in Vienna of clinical laryngology and rhinology by Turck and Czermak. Later Dr. Wishart will spend some weeks at the clinics of Professor Killian in Freiburg and Hammnel in Heidelburg, before going to England. The doctor and his wife expect to return to Canada about the middle of June.

Obituary

SUDDEN DEATH OF DR. J. H. FISHER.

The death of Dr. John H. Fisher, at his residence, 18 St. Patrick street, on Feb. 15th, was quite sudden and unexpected. He had attended his patients as usual on the Wednesday and Thursday previous, and at 4 o'clock on Saturday was dead from an obscure form of blood-poisoning following upon a cold and influenza, from which he had suffered only two days. Several physicians were in attendance, including his brother-in-law, Dr. Clemesha, of Port Hope and Drs. Dawson, Anderson, Bingham and Davidson of this city.

Dr. Fisher was born on the 9th of January, 1850, in South Monaghan, where he spent the greater part of his life. He was educated at Victoria College, Cobourg, taught school a couple of years at Bobcaygeon, then studied pharmacy and practised as a druggist in his native place for several years, and finally studied medicine, taking up practice in Toronto about twenty years ago, where he had been ever since.

He was a member of the Ancient Order of United Workmen, and belonged to St. Philip's Church. He is survived by his wife, who was Miss Clemesha of Port Hope; one son, Harold, a barrister in Ottawa, and one daughter, Miss Effie, at home. The funeral took place on Tuesday afternoon the 18th, to Mount Pleasant Cemetery.

DEATH OF DR. J. McMASTER.

The death occurred on February 20th at the General Hospital of Dr. J. McMaster, of 116 McCaul Street, from blood poisoning.

Deceased had been sick since December 8th last, and went to the hospital, where he underwent several operations. He contracted blood poisoning while at his work, and for some time it was thought his life might be saved. He rallied several times, but a few days before death ensued took a turn for the worse. Another operation was performed to relieve him, but he gradually grew worse, and he died on Thursday, February 20th.

Dr. McMaster was born in Barrie and lived there for some time. He had for several years been teaching at different colleges, and for some time was head of the Technical School. For the past few years he was in charge of the X-ray department of the General Hospital.

Deceased was 49 years old, and leaves a widow and two children. He was well known in medical circles and was a member of the I. O. F. and K. O. T. M.

News of the Month.

ONTARIO MEDICAL ASSOCIATION.—PROVISIONAL PROGRAMME.

The Committees on Papers and Arrangements have pleasure in submitting the following programme for its 28th Annual Meeting, to be held at Hamilton, May 26th, 27th, and 28th, in the College of Music Building, James Street South. The present arrangement of papers will not necessarily be adhered to as a new grouping of subjects may be deemed advisable before the publication of the final programme. We believe that no programme has been issued in the history of the Association more replete with interest from the first item to the last than this promises to be. Every practitioner in the Province can well afford to set aside these days for attendance at Hamilton. The sectional plan of meetings has been adopted, and will be enlarged if the papers will permit of doing so. Sections will meet in the mornings and the afternoons are to be devoted to the addresses and subjects of general interest. The evenings have been set aside for entertainment.

TUESDAY, MAY 26TH.

Surgical Section.

W. Coekburn, Hamilton—"Treatment of Acromio-Clavieular Dislocation."

H. A. Bruce, Toronto—Title to be sent.

N. A. Powell—Title to be sent.

H. B. Lyle, Surgeon to St. Luke's Hospital, New York—"The Hyperemic Treatment."

Clinic and Luncheon at the General Hospital.

Medical Section.

W. L. Silcox, Hamilton—"Opsonins." Discussion to be led by W. Gibson, Kingston.

W. Goldie, Toronto.

Adam H. Wright, Toronto.

J. Sheahan, St. Catharines.

Benson Cohoe, Assistant Physician, Roosevelt Hospital, New York.

Clinic and Luncheon at the General Hospital.

General Session—2.15 P.M.

President's Address.

Symposium: Arteriosclerosis—

Pathology of—J. J. Mackenzie, Toronto.

Cerebral Manifestations—Colin K. Russell, Assistant in Medicine, University of McGill.

Aortic Arch Manifestations—Thomas McCrae, Associate Professor of Medicine, Johns Hopkins, Baltimore.

Muscle Manifestations—Harry C. Buswell, Associate Professor of Medicine, University of Buffalo.

Visceral Manifestations—J. H. Bauer, Hamilton.

Treatment—H. A. McCallum, London.

Evening—Smoking Concert at the Yacht Club, Burlington Beach.

WEDNESDAY, 27TH.

Surgical Section—9 A.M.

J. P. Morton, Hamilton—Title to be sent.

F. N. G. Starr, Toronto—Title to be sent.

Edwin Seaborn, London—Title to be sent.

G. T. McKeough, Chatham—"Mechanical Ileus—Operation—Recovery—Remarks on the Treatment."

W. E. Olmsted, Niagara Falls—Ulcer of the Stomach.

E. E. King, Toronto—Title to be sent.

Medical Section.

G. S. Glassco, Hamilton—Title to be sent.

J. R. Stanley, St. Mary's.

R. J. Dwyer, Toronto.

D. Dunton, Paris.

F. Fenton, Toronto.

George Hodge, London—"The Treatment of Pneumonia."

K. C. McIlwraith, Toronto.

R. Ferguson, London.

General Session—Afternoon.

Address in Surgery—Charles L. Scudder, Surgeon to the Massachusetts General Hospital.

G. E. Armstrong, Professor of Surgery, University of McGill.

V. P. Gibney, Professor of Orthopedic Surgery, College of Physicians and Surgeons, New York.

Evening Session—Dinner at the Royal Hotel.

THURSDAY, 28TH.

Surgical Section.

H. Sinclair, Walkerton.

S. H. McCoy, St. Catharines.

A. E. Garrow, Montreal—"Duodenal Ulcer."

H. Sanderson, Detroit.

D. E. Mundell, Kingston—"Pancreatic Cyst."

MEDICAL SECTION.

D. King Smith, Toronto.

J. T. Fotheringham, Toronto—"Malignant Endocarditis."

A. T. Gordon, Toronto.

Campbell Howard, Assistant in Medicine, University of McGill.

G. B. Cruickshank, Windsor—"The Treatment of Appendicitis."

J. C. Meakins, Pathologist to the Presbyterian Hospital, New York—"Rheumatism."

Dr. George Acheson, Galt.

AFTERNOON—GENERAL SESSION.

Address in Medicine—Charles G. Stockton, Professor of Medicine, University of Buffalo.

L. G. Cole, Radiographer to the Roosevelt Hospital, New York—Illustrated Lecture.

C. K. Clarke, Toronto—Psychiatry in Relation to General Medicine.

HAVE YOU SEEN MARDI GRAS?

BEYOND question, New Orleans presents more attractions to the tourist in search of health, recreation, and enjoyment than any other American city. Beginning with the ball and tableaux of the Twelfth Night Revelers on January 6th, the season of 1908 presents one continuous round of festivities. The fun and frolic of Mardi Gras week commences the evening of Thursday, February 27, with the gorgeous street parade, tableaux, and ball of the Knights of Momus. The finale is on Tuesday, March 3rd, with day parade of Rex, followed by grand tableaux in the evening, and by the mysterious appearance and spectacular parade of the Mystic Krewe of Comus.

MARDI GRAS WEEK.

Feb. 27.—Knights of Momus, Street Parade at 8 p.m., Tableaux and Ball.

March 2.—Arrival of Rex, 2 p.m., Naval and Military Parade.

March 2.—Krewe of Proteus, Street Parade at 8 p.m., Tableaux and Ball.

March 3.—Rex Parade 10 a.m., Ball 8 p.m.

March 3.—Mystic Krewe of Comus, Street Parade 8 p.m., Tableaux and Ball.

All balls are given at the French Opera House, except Rex, which is held at Washington Artillery Hall.

All parades pass in front of the New St. Charles Hotel, where guests may view them from the terrace adjoining the Palm Garden.

The New St. Charles is modern, fireproof, and first-class. It accommodates one thousand guests on both the American and European plans. Its palm gardens, sun baths, open-air promenade terrace, electric Roman and Turkish baths, make it the finest hotel in Louisiana.

"March, April, and May are especially lovely and attractive, with the blue of Italian skies overhead, the perfume of roses in the air, and the eye dazzled by the beauty and profusion of her tropical flowers."

THE COMING INTERNATIONAL CONGRESS ON TUBERCULOSIS.

THE coming International Congress on Tuberculosis, at Washington, D.C., in September, 1908, will be an unique event in the New World.

This Congress meets once in three years. It has never met in America, and after 1908, will not meet in this country for many years to come.

This Congress will put the people of this country in the relation of host to the leaders of this movement in all parts of the world. It will be a real World's Congress. It will carry on, for three weeks, public discussions of the Tuberculosis problem, led by the most eminent authorities on this subject, in this and other countries. Official delegates will be present from nearly all civilized countries. There will be a course of special lectures, to which all members of the Congress and the general public are invited.

The Congress will be divided into seven sections, giving ample scope for participation of both scientific and lay members.

There will be a great Tuberculosis Exposition, in which one can see what is going on, the world around, in the campaign against Tuberculosis.

There will be Clinics and Demonstrations throughout the whole period of three weeks, giving medical and lay delegates object lessons on the causes and prevention of tuberculosis.

There will be very valuable publications, of which the *Transactions* will be the most important. The transactions of the last Congress are published in three volumes. The proceedings of this Congress will require four volumes. These are free to all members of the Congress, who have paid their membership fee ($5.00).

The cost of the Congress will far exceed the revenue derived from fees. This cost will be provided for by a special Committee of the National Association for the Study and Prevention of Tuberculosis, which will invest a large sum in the project.

The American membership should number ten thousand persons. There are two classes of members: Active Members, who pay a fee of $5.00; and Associate Members, who pay a fee of $2.00, and have all the privileges of membership, except the right to vote and to receive the printed volumes.

THE SIXTEENTH INTERNATIONAL MEDICAL CONGRESS.

The Sixteenth International Medical Congress will be held in Budapest, the capital of Hungary, under the patronage of His Imperial and Apostolic Royal Majesty the King of Hungary (Emperor of Austria), from the 29th of August to the 4th of September, inclusive, 1909.

It will be the endeavor to establish a strong Canadian National Committee to represent Canadian Medicine at this Conference, and the Executive Committee of the Canadian Medical Association has re-appointed Dr. W. H. B. Aikins of Toronto to act as Secretary of the Canadian National Committee, which appointment has been confirmed by the Executive Committee of the Congress at Budapest. Dr. McPhedran, who was Chairman of the Canadian Committee for the International Medical Congress, held at Lisbon in 1906, will be associated in endeavoring to secure the formation of a strong and representative committee. Any member of the profession in Canada desiring information may communicate with either of the above-named.

Matters of interest pertaining to the Congress will be published from time to time.

The members of the Congress will be (a) certified Doctors who apply and have paid membership fees; (b) experts having paid membership fees, with recommendations from the Canadian National Committee to the Executive Committee of the International Medical Congress, will be admitted as members. The membership fee is $5.00.

The members will receive the first volume of the transactions of the Congress, and also a volume on the work of the Department of their choice.

The following is taken from the advance announcement received from Budapest:

The Congress is divided into the following departments: Anatomy, Embryology, Histology, Physiology, General and Experimental Pathology, Microbiology (Bacteriology), Pathological Anatomy, Therapeutics (Pharmacology, Physical Hygiene, Balneology), Internal Medicines, Chirurgy, Obstetrics and Gynecology, Ophthalmology, Diseases of Children, Diseases of the Nervous Sys-

tem, Psychiatrics, Dermatology and Syphilography, Urology, Laryngology, Otology, Stomatology (Dental and Oral Surgery), Hygiene and Doctrine of Immunity, Juridical Medicine, Military and Naval Surgery, Navigation Medicines and Tropical Dseases.

The Congress will arrange two festival sessions, an inaugural and a closing one, at which none can take the platform except those summoned by the managing committee or certain representatives of the State after the announcements and customary speeches have been made. During the inaugural session, the managing committee will proclaim, in order of succession, the names of the honorary presidents, and in the closing session the Congress-place.

The subjects of lectures, of reports, and the lecturers, to be selected by the departments; the programme of reports will be published at latest by the 31st December, 1908.

By the 31st January, 1909, reporters have to hand the manuscript of their reports into the office of the Congress, and the members of the representative departments receive them in print, sent to their abodes, by the 31st July.

The corrections will be submitted to the care of the Secretaryship. A legible hand is entreated. The term for the announcement of optional subjects is fixed for the 30th April, 1909.

Lectures announced after the above date will only be included in the order of the day, in one case only, viz., after those announced in due time have been negotiated, and if time admits.

Two or more departments may hold general session, provided their programmes be published at latest by the 31st December, 1908.

Members are permitted to co-operate in the departments of others besides those of their own choice.

Only such of the discretionally announced lectures will be published, whose authors have delivered them personally at the Congress, and the copies of which the Executive Committee, in accordance with the decision of the presidency of the department, have determined.

The time allowed for the statement of reports must, in no case, exceed 20 minutes; for other deliveries, 15 minutes; for the discussions, for the former 10, for the latter 5 minutes. The answers of lecturers may be extended to 10 minutes.

The manuscripts of the speeches made on the occasion of both festival sessions are to be handed over to the Secretary-General on the day of the sitting; the manuscript of the lectures and discussions delivered in the departments are likewise to be handed to the managing Secretary of the representative departments, on the day of the sitting, having reference to the lecture or the discussion.

The office of the Congress, in its international intercourse, will

avail itself of the French, German, and English languages. At the festival and general sittings the above-named languages may be used; in the departmental sittings, however, other languages are available; provided one of the members present communicates, within the time fixed for the duration of the festival, the purport of the lecture or discussion in one of the above-named languages.

The whole of the correspondence is to be directed to the office of the Congress. Office of the Sixteenth International Medical Congress Budapest, VIII., Esterhazy-Utcza 7.

On the envelopes of letters having reference to the scientific energies of the departments, the department must be written, to which the delivery or enquiry applies; letters of this description, the Secretaryship at once has forwarded to the President of the respective departments.

The term for forwarding applications with reference to the organization of the Congress expires on the 31st December, 1908.

The programme of social gatherings, of making known railway-favors, of accommodation, and of excursions, will be published by the 30th April, 1909.

SMITHSONIAN INSTITUTION—HODGKINS FUND PRIZE.

The Hodgkins Fund Prize of $1,500 is offered by the Smithsonian Institution, Washington, D.C., in accordance with the following announcement:

In October, 1891, Thomas George Hodgkins, Esquire, of Setauket, New York, made a donation to the Smithsonian Institution, the income from a part of which was to be devoted to "the increase and diffusion of more exact knowledge in regard to the nature and properties of atmospheric air in connection with the welfare of man."

In the furtherance of the donor's wishes, the Smithsonian Institution has from time to time offered prizes, awarded medals, made grants for investigations, and issued publications.

In connection with the approaching International Congress on Tuberculosis, which will be held in Washington, September 21 to October 12, 1908, a prize of $1,500 is offered for the best treatise that may be submitted to that Congress "On the Relation of Atmospheric Air to Tuberculosis."

The treatise may be written in English, French, German, Spanish, or Italian. They will be examined and the prize awarded by a committee appointed by the Secretary of the Smithsonian Institution in conjunction with the officers of the International Congress on Tuberculosis.

The right is reserved to award no prize if in the judgment of the Committee no contribution is offered of sufficient merit to warrant such action.

The Smithsonian Institution reserves the right to publish the treatise to which the prize is awarded.

Further information, if desired by persons intending to become competitors, will be furnished on application.

CHARLES D. WALCOTT,
Secretary Smithsonian Institution.

Washington, February 3, 1908.

ITEMS OF INTEREST.

The St. Thomas Medical Association.—At a meeting of the St. Thomas Medical Association, held on the 6th day of December, A.D. 1907, A. C. Brower, M.P.P., East Elgin, and Finlay G. MacDiarmid, M.P.P., West Elgin, met with the association and discussed the Osteopathic Bill, and concluded that the bill should be turned down, as it was not a desirable legislation, and that all persons desirous of practising such or any other branch of medicine should be compelled to pass the regular examination as laid down by the Medical Council.

Removal of the Firm of Chandler, Ingram & Bell, Limited.—The trend of business houses in Toronto seems in many instances to be uptown, especially in the case of firms who are identified with University interests. The last concern to recognize the advantages accruing from getting as near as possible to the University and the new Toronto General Hospital (which will soon be erected on College Street) is Chandler, Ingram & Bell, Ltd., who up till the present have been on the north corner of Yonge Street and Wilton Avenue. The new premises they will occupy comprise No. 420 Yonge Street, just one block south of College. This store has recently been completely renovated, and a handsome front put in. The new occupants will now be in a position to handle their increasing business with a despatch that was impossible while cramped in a building down-town that proved not half big enough for them. Chandler, Ingram & Bell will carry in their new warerooms one of the largest stocks in Canada of physicians' supplies, medical books, and hospital furniture.

The Physician's Library.

BOOK REVIEWS.

The Horse: Its Treatment in Health and Disease, with a complete guide to breeding, training, and management. Edited by Prof. J. Wortley Axe, M.R.C.V.S., ex-President of the Royal College of Veterinary Surgeons; late Lecturer at the Royal Veterinary College and at the Agricultural Colleges of Downton and Wye; Chief Veterinary Inspector to the Surrey County Council; Consulting Veterinary Surgeon to the British Dairy Farmers' Association; Author of "The Mare and Foal," "Abortion in Cattle," "Anthrax in Farm Stock," "Examination of Horses as to Soundness," "Glanders: Its Spread and Suppression," "Swine Fever," "Lithotomy, or The Removal of Stone from the Bladder of the Horse." Published in nine volumes. Divisional Volumes I. and II. London, England: The Gresham Publishing Co., 34 Southampton Street, Strand. 1907. Canadian Agents: D. T. McAinsh & Co., Bay and Adelaide Streets, Toronto.

It was with a good deal of pleasure and satisfaction that we recently received Prof. J. Wortley Axe's work on the horse. We had heard from several sources that it was a book with "quality," as one would expect from its subject, and since perusing the first two volumes we heartily agree with that opinion.

Volume I. covers three sections, viz., The Exterior of the Horse, Conformation and Its Defects, and Varieties of the Horse. We would like, firstly, to compliment the publishers upon the splendid type used for this book. It is large, very clear, and, being printed on good paper, makes it easy reading. The illustrations are magnificent and add tenfold to the value of the text.

The author, in section one, divides the anatomy of the horse into eight sub-chapters: The head, upper aspect of the body, posterior extremity, anterior extremity, the latter and inferior region, external genital organs, fore extremity, and the posterior or hind limb. He also subdivides sections two and three in a similar manner, so that all the reader has to do is to refer to a very extensive contents to find his subject..

Under Health and Disease, Dr. Axe considers the horse as he suffers from different maladies, disordered alimentation, acute indigestion, gastritis, chronic dilatation of the stomach, colic, con-

stipation, diarrhea, enteritis, intestinal obstruction, stones, diseases of the liver, hernia, irregularities and diseases of the teeth, the urinary apparatus, and the urine.

Volume II. contains a number of full-page plates of different hackney stallions, Hunter Tennis Ball, harness horses, Shetland ponies, the Arab mare, "Bozra," and American trotters, "Cresceus," and "Star Pointer." There are a large number, too, of text illustrations, which add greatly to the value of the book.

Very few men live to-day—and perhaps especially physicians who, were it not for the faithfulness of "man's noblest friend," might find medical practice considerably harder than it really is—who have not every reason to appreciate a good horse. What ignorance exists, generally speaking, regarding the management of the horse in health and disease! Many a physician lives who, with all his knowledge of disease, and its cure in human beings, knows shamefully little of how one of the lower animals should be treated when sick. We would respectfully suggest to such a brother practitioner that he invest $2.50 a volume in Prof. Axe's work, as it will be a source of pleasure and interest to him, and incidentally save him many times the sum mentioned in the avoidance of veterinary bills. W. A. Y.

Diseases of the Nervous System. Edited by ARCHIBALD CHURCH, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence, Northwestern University Medical Department, Chicago, Ill. An authorized translation from "Die Deutsche Klinik," under the general editorial supervision of JULIUS L. SALINGER, M.D. With one hundred and ninety-five illustrations in the text, and five colored plates. New York and London: D. Appleton & Co. 1908.

This is the latest volume of Modern Clinical Medicine published by Appletons, and it is one of the most important of that series, as it deals in a complete and comprehensive manner with the most prominent subjects in neurology. No less than twenty leading German writers of large experience have been induced to contribute the results of their investigations into various forms of nervous diseases, and the compilation of their contributions enables the editor to produce a large and handsome volume containing the most recent known facts on these subjects. The study by Rothman on the Macroscopic Anatomy of the Central Nervous System, with special reference to the physiology of the brain, is particularly clear and interesting, while the article by Schuster on General Neurological Diagnosis, including Lumbar Puncture, and the essay by Wernicke on the System Complex of Aphasia are both equally lucid and instructive. The section on Neuritis and Polyneuritis, by Cassirer, and that on Neuralgia, by Eichhorst,

would of themselves alone make a work of great interest and value to almost any general practitioner; and when it is remembered that the whole volume represents the combined research of so many other brilliant men in addition to those already mentioned, it will be ungrudgingly acknowledged that the aim of the editor and the authors to present a complete picture of nervous diseases has been satisfactorily accomplished. N. H. B.

Gonorrhea: Its Diagnosis and Treatment. By Frederick Baumann, Ph.D., M.D., Professor of Genito-Urinary Diseases of the Reliance Medical College; Instructor in Dermatology and Venereal Diseases in the College of Physicians and Surgeons, Chicago. Pp., 200. Illustrations, 52. New York and London: D. Appleton & Company.

This work Dr. Baumann presents as a concise digest of his teaching in the medical department of the University of Illinois. It were almost better named a Plea for the Instrumental Treatment of Gonorrheal Urethritis, for 7 of the 200 pages of reading matter deal with instrumental manipulations, and 48 of the 52 illustrations are cuts of various urethral dilators, sounds, etc.—an imposing armamentarium, indeed, with which to approach and destroy the elusive gonococcus. After a few chapters on the anatomy of the urethra and pathology, and diagnosis of gonorrhea, he plunges "in media res" and following Oberlander's classification, considers gonorrheal urethritis under two divisions—the soft and hard infiltrations. The latter class is again subdivided into infiltrations of the first degree—where glandular infection is prominent; second degree, a more marked condition of the first; and, third degree, or strictures.

In treatment, he decries the use of the silver compounds, argyrol, protargol, as being chemically inert, and bespeaks his preference for silver nitrate, potassium permanganate, zinc sulphate, nitric acid, as weak injections. He also favors balsamics internally. Perhaps the author is at his best when describing the use of his instruments, and his remarks on the treatment of hard infiltrations of the third degree, strictures, are good. His plan is gradual dilation over a period of weeks, using Kollmann's four-pronged irrigating dilator. He advises frequent inspection of the urethral mucous membrane by means of the urethroscope, although he denies himself the opportunity thus afforded for instillations or topical applications. Twenty-five pages are rightly devoted to gonorrheal prostatitis, and the usual forms of treatment discussed, and then the rest of the pages treat in a sketchy manner of epididymitis, vesiculitis, gonorrhea in the female, and gonorrheal arthritis.

In the treatment of arthritis, he makes timely mention of the opsonic index and treatment with bacterial vaccines. He uses

Bier's congestive hyperemia in arthritis, and, save the mark! in epididymitis; but this should not surprise us, for we may yet hear of its application by some misguided enthusiast to even a varicose ulcer.

This little work on the whole repays the reading. It contains no surgical heresies, and emphasizes the usual gonorrheal axioms in a helpful manner. O. T. D.

The Port of Missing Men. By MEREDITH NICHOLSON, author of "The House of a Thousand Candles," "The Main Chance," "Zelda Dameron," etc. With illustrations by CLARENCE F. UNDERWOOD. Toronto: McLeod & Allen, Publishers.

This novel should be particularly agreeable to American readers, owing to the high character and personal charms of the heroine, Shirley Clarborne, and the democratic leanings of the hero, Count von Stroebel.

The leading characters are well drawn. The hero, in spite of apparent indefiniteness of purpose, comes out with flying colors at the end. We confess to a liking for the little cavalryman, Oscar; there is no indefiniteness about him. The more important villains escape death in America, probably to win it in Europe. The descriptions of Virginia mountain scenery are most charming. The author is at his best in describing American characters and scenery. Several fine illustrations add to the value of the book. J. J. C.

The Principles and Practice of Modern Otology. By JOHN F. BARNHILL, M.D., Professor of Otology, Laryngology, and Rhinology, Indiana University School of Medicine; and ERNEST DE W. WALES, B.S., M.D., Associate Professor of Otology, Laryngology, and Rhinology, Indiana University School of Medicine. Octavo of 575 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Co. 1907. Cloth, $5.50 net; Half Morocco, $7.00 net. Canadian Agents: J. R. Carveth & Co., Ltd., Toronto.

The quality of the paper, the good type, the number and excellence of the illustrations, at once attract attention, yet an excuse for the appearance of a new work on the diseases of the ear may at first seem somewhat difficult to find. The authors advance as one their desire to modernize the subject. If any subject has been modernized it is that of otology. Unfortunately the modernizing has practically been confined to the diseases of the mastoid process, and the complications resulting therefrom. Fully one-third of the book is given up to this subject. If the same happy advances had been made in the non-suppurative diseases of the middle ear, one might be more proud of the modernizing. If we have not advanced in the treatment, we have made marvellous

strides in our knowledge of how to prevent middle-ear disease. The real treatment is to prevent them. Many a patient receives a deal of treatment which is just as satisfactory to his physician as to him, and that's mighty little. A little more time spent on the physical examination would save the patient's time and purse, and the physician's reputation. Far too little is known of the functional testing of the ear, a subject into which the authors enter fully. M.

Wellcome's Photographic Exposure Record and Diary, 1908.—Wellcome's Photographic Exposure Record and Diary banishes the greatest obstacle to success in photography—that of correctly estimating exposure. The actual determination of correct exposure is made by means of an ingenious little mechanical calculator attached to the cover of the book. A single turn of a single scale is all that is necessary. This little instrument—with its accompanying tables giving the value of the light at all times of the day and year, and its list of the relative speeds of more than 180 plates and films—is alone worth more than the cost of the whole book. It certainly saves dozens of plates which would otherwise be wasted owing to errors in exposure.

Trained Nursing a Modern Heroism Little Heralded.—No music, flags, or cheering, but the fight is with the grimmest and most terrible of all foes. The trained nurse goes into battle encouraged by none of the blood-stirring incitements of the soldier. She is often entirely alone; her struggle must be quiet, and her antagonist is grim and terrible and ever-watchful, because it is Death itself. Suppose it is you yourself who are suddenly smitten in the midst of your life and work, says Anne O'Hagan, in the February *Delineator*. With the coming of the trained nurse you feel infinite relief and thanksgiving. You are no longer obliged to struggle alone, to watch the door alone lest that Other One enter. The nurse, calmest of warriors, least grim of sentinels, sits beside your bed and will keep the vigil for you. You transfer the battle to her. For yourself, you will lie still and think—not of the combat before you, not of the turmoil behind you—that whirling, dusty conflict of the world which was so important a little while ago—but of the great, important things—earth and its greenness, the wide, white country skies on moonlight nights, the flash of bluebirds' wings in the September sunshine, all the daily miracles you had forgotten to watch when you were hurrying to those manifold appointments of yours. Now you are in the region where only "the mightier movement sounds and passes, only winds and rivers, only life and death."

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Original Contributions.

OPSONINS AND THE PRACTICAL RESULTS OF THERAPEUTIC INOCULATION WITH BACTERIAL VACCINES.*

BY GEORGE W. ROSS, M.A., M.B. (TOR.), M.R.C.P. (LOND.), TORONTO.

No subject of recent years has been before the medical world more prominently than the opsonic theory and inoculation with bacterial vaccines, and we must earnestly consider whether or not such an interest is justified. To reach a right conclusion we must view the whole subject from at least two standpoints: the one is that of the opsonic theory and the other that of the therapeutic inoculation with bacterial vaccines. Let us first review very briefly the theory and then devote most of our attention to the results achieved by inoculation with vaccines.

Opsonins are substances not yet isolated, but known to exist in the blood, whose function it is to unite with bacteria and prepare them for the leucocytes to attack and destroy. Without such preparation the fastidious leucocytes refuse to ingest bacteria, and so this defensive power of the organism is in abeyance. One of Wright's discoveries was this fact, and a second was a technic by which we are enabled to measure the quantity of opsonins in a given blood. The result of such measurement is expressed as the opsonic index. If, therefore, we say that a patient, the subject of tuberculous glands, has an opsonic index of 0.5 to the tubercle bacillus, we simply mean that his blood contains but one-half the normal quantity of those opsonins which are essential to combating the infection of the tubercle bacillus.

Such an observation is of great scientific interest, but as practical physicians we want to know its application to the treatment

* From the Laboratory of Immunization, Toronto General Hospital.

and diagnosis of disease. The question, therefore, is, given a low opsonic index in the course of a chronic bacterial infection, how can we raise that index and relieve or cure our patient? Wright provided the solution of this problem and gave us bacterial vaccines.

By a bacterial vaccine is meant "bacteria or their products." In actual practice we use bacteria grown in culture-tubes and then devitalized. The principle involved in therapeutic inoculation is that a vaccine, consisting of devitalized bacteria of the same strain as that responsible for the patient's infection, should be administered by subcutaneous injection in correct doses at appropriate times. It is in this connection that the measurement of the opsonic power of the blood aids us, and, without elaborating the argument, permit me to state as my belief that the study of the opsonic power of a patient's blood does enable us to judge the proper dose of a vaccine and the appropriate time for inoculation and reinoculation.

The principle of bacterial vaccination may be brought home to our minds by an example or two. If we have to treat a patient with boils due to infection by the *Staphylococcus pyogenes*, we will grow the staphylococcus, kill it and inoculate our patient with a proper dose of this dead culture. If our patient has tuberculous glands, we will inoculate him with new tuberculin (Bacilli emulsion), which consists of devitalized tubercle bacilli. The principle holds similarly for all bacteria that we can grow.

With this very brief summary of the basic principles, I propose to deal with a few of the results already achieved with these newly forged instruments of therapy. But first let me refer to a practical, though tentative, classification of bacterial disease that four years' investigation of the opsonic index in many hundreds of cases has elicited.

Classification.

Class 1.—This comprises mostly *chronic infections* in which it has been determined that a low opsonic index is persistent. The lowered opsonic index is thought to be due to the absence of "autoinoculation" (Fig. 1). By autoinoculation is meant the escape of bacteria or their products from the focus of disease into adjacent lymph or blood streams. The result of such an escape is to increase the opsonins and other bacteriotropic substances in the blood by stimulation of the machinery of immunization and often to cure or relieve the infective process. The absence, therefore, of autoinoculation determines the persistence of the infection and indicates the necessity of interference with bacterial vaccines by means of inoculation. In this great class where autoinoculation is slight or absent there are included many tuberculous affections, such as tuberculous disease of glands, bones and early, or moderately early, pulmonary tuberculosis. We find here also boils,

acne, sycosis, felons, and many cases of sepsis and persistent sinuses, etc.

Class 2.—In this class are those cases in which autoinoculation is the characteristic feature. The more severe cases of pulmonary tuberculosis may be taken as the type. The outstanding feature of these cases is the fluctuation of the opsonic power of the blood from low to high and high to low.

Class 3.—This class comprises the pure septicemias. It is probable (though not yet proved) that certain of these have a generally lowered opsonic power for reasons that need not be discussed. Here are included ulcerative endocarditis, puerperal septicemia, etc.

It is in the first great class, however, where the infection is localized and where in consequence autoinoculation is withheld that inoculation with bacterial vaccines has been most successful. I propose to summarize briefly the results that have been obtained,

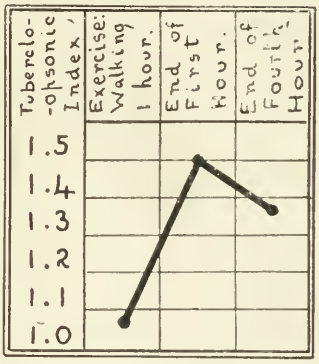

Fig. 1.—Chart illustrating "auto-inoculation" in a case of moderately severe pulmonary tuberculosis as a result of an hour's walk. The tracing shows the variation of the tuberculo-opsonic index.

but especially to refer to cases that have come within my own experience; let me, however, first present the immunizator's method of approach by citing a particular case.

History.—The patient was a young man, aged 20, who seven weeks previously had had an empyema evacuated by resection of a rib. The daily discharge had slowly lessened to about half an ounce of pus, which gave a pure culture of the pneumococcus of Fränkel. With this bacterium as the basis of my further investigation, I determined his opsonic index and found it normal. Nevertheless, I thought that I might expedite matters if I raised this index and so I prepared him a vaccine by growing the pneumococcus in culture tubes, collecting the growth in salt solution and killing it at 60 C. (140 F.). Of this vaccine, I inoculated 100 millions of pneumococci with the result that his opsonic index rose quickly to 2.5. Further inoculations raised his index when

it fell and by this means he was made to lead a life of increased resistance to the pneumococcus and was thus enabled to overcome his infection (Fig. 2.) The clinical result was striking. In less than two weeks the discharge entirely ceased and a sinus, which though narrow had been six inches long, completely closed. The boy returned to his work and had no further trouble.

I mention this case in illustration of the principles of the method, and as a rule, therefore, we must determine the particular micro-organism responsible, estimate the resistance of the patient to it, prepare a vaccine from it and inoculate in proper doses and at appropriate times as indicated by a study of the variation of his opsonic power. Time will not permit me to enter into this aspect of the subject.

Let us now consider certain groups of infections, and, since the basis of our method is bacteriologic, perhaps it would be most direct if we viewed the subject from that standpoint. I will first discuss infections due to the *Staphylococcus pyogenes.* They are numerous and common. Some are boils, carbuncles, acne, sycosis, felons, styes and septic wounds.

The tracing shown in Figure 3 has reference to a patient who had a large and very painful furuncle on the buttock. His opsonic index to the *Staphylococcus pyogenes aureus* before inoculation was 0.46. I then gave him 300 millions of staphylococci. His index rose to 1.5, as you see, and remained well above normal for some days. The clinical alteration in his symptoms was marked, and in 24 hours all pain and tenderness had left him. Further progress was uneventful.

I have treated eleven patients with boils—most of the cases is to say, within forty-eight hours in most cases the pain had disappeared and also almost all tenderness. As a rule these cases proceeded to complete relief without incident. Unfortunately, immunity from relapse is not assured. Some remain well for long periods, while others have a return after varying intervals. This much can be said, however, that relapses are usually of a less severe nature and, furthermore, can be easily controlled by inoculation if the treatment of the primary lesion or lesions was successful. The two patients of these eleven that were not cured improved considerably, but showed a persistent tendency to relapse. On the whole, however, I feel confident that the vast majority of cases of acute or chronic furunculosis can be completely and rapidly controlled by inoculation with a staphylococcus vaccine.

In Boston I treated a patient with severe carbuncle by inoculation with a staphylococcus vaccine with striking effect. The patient was a laborer of 45 who had a carbuncle on his back as large as a baby's fist. Inoculation with 300,000,000 staphylococci removed all pain and tenderness in forty-eight hours, the central slough came away in eight days and almost all the inflammatory mass was dissipated a week later.

Altogether I have succeeded in curing or greatly benefiting the patients in five cases of acne vulgaris; still the results are considerably less striking than those obtained with furunculosis. There is a number of cases in which we completely fail—why, I do not know.

Sycosis barbae is usually easily cured by inoculation with a staphylococcus vaccine. I have under treatment a patient with a very severe case of four years' standing. He is now almost well.

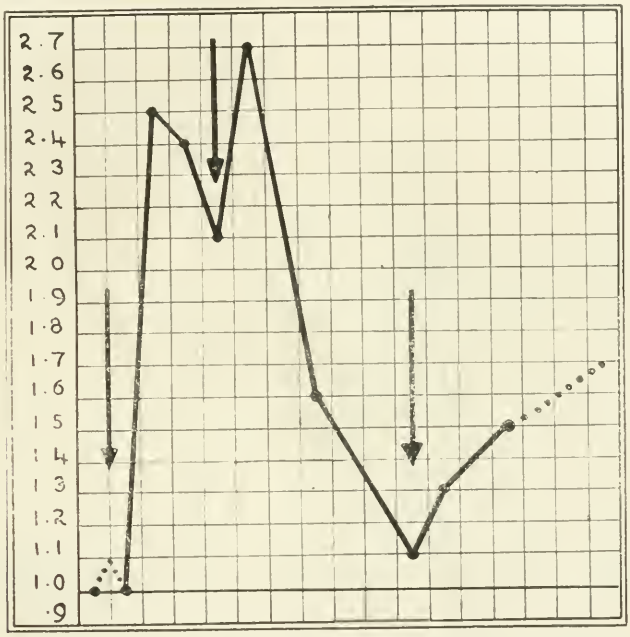

Fig. 2. Chart referring to a case of chronic empyema sinus due to the pneumococcus of Frankel which recovered in two weeks as a result of inoculations with 50 to 100 millions of pneumococci. The tracing show the variation of the pneumococco opsonic index. The arrows refer to inoculations with the homologous vaccine.

Wright has reported many successful cases.

If my time was less limited I would give in detail a case of severe septic hand with scattered furuncles and also a case of orbital infection due to staphylococcus. In both the patients responded rapidly and satisfactorily to inoculation with staphylococcus vaccine.

Interesting and important as the results have been with such septic processes as I have mentioned, they hold our attention much less than those which have been obtained by inoculation with new tuberculin in many manifestations of tuberculosis. I shall now refer to several cases.

The first and one of the most striking that I know of was a case of tuberculous iritis. The patient was a boy of 12, who was

sent to me by Mr. Lang, of Moorfield's Eye Hospital in London. Tubercles were plainly evident on both irises and of such a severe nature on one that excision of the eye was contemplated. In addition a keratitis punctata obscured his vision. His opsonic index was 0.85 before inoculation. I then inoculated him with 1-750 milligram of new tuberculin (bacilli emulsion), and subsequent estimations demonstrated that this inoculation had increased his index to 1.4 and higher. The inoculations were continued for about six months, when I left him in charge of Dr. Clive Reviere for further treatment. At the end of the first six months all the tuberculous masses were much reduced in size and one had practically disappeared. The keratitis had almost completely cleared up. This case, in which one could actually see the tuberculous masses melt away under specific treatment, seems to me to be evidence

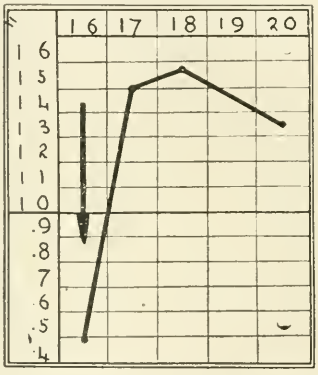

Fig. 3.—Chart illustrating the rise of the staphylococco-opsonic index as a result of one inoculation (shown by the arrow) of 300 million staphylococci in a case of furunculosis. Recovery.

of the benefit resulting from the use of tuberculin in localized tuberculosis.

I show also the chart (Fig. 4) of a young man aged 22, the subject of a tuberculous cystitis. Tubercle bacilli were easily found in his urine and cystoscopic examination revealed a tuberculous ulcer on the trigone of the bladder. He had frequency of micturition and continued perineal pain. There was little clinical evidence of improvement for three or four months, during which time his opsonic power was maintained at a comparatively high level by repeated inoculations with tuberculin. Then within a week or two the frequency and pain left him and he soon returned to a normal healthy condition. The tubercle bacilli also disappeared from his urine. Nine months later a condition of excellent health obtained and he expressed himself as quite well.

I have treated only two patients with tuberculous glands and both of these did remarkably well. Indeed, it would seem that treatment of this condition by tuberculin constitutes a real

triumph for inoculation. Sir Almroth Wright has treated many patients, and when I last saw him he had yet to meet with a failure. Time will not permit me to detail these cases.

I have successfully treated one patient with lupus. Lupus, however, has proved refractory to tuberculin and on the whole we fail in this condition as often as we succeed. On the contrary, tuberculous dermatitis usually responds most satisfactorily to inoculation. I have seen the patients in several cases that might reasonably have been termed desperate respond in a truly wonderful fashion to inoculation with tuberculin. I know also of cases of tuberculous kidney, of tuberculous epididymitis and orchitis, of tuberculous disease of bones and joints and of tuberculous peritonitis, in which, to all intents and purposes, the patients have been cured by inoculation with tuberculin, but I cannot stop to consider these cases.

The subject of pulmonary tuberculosis would be in itself a

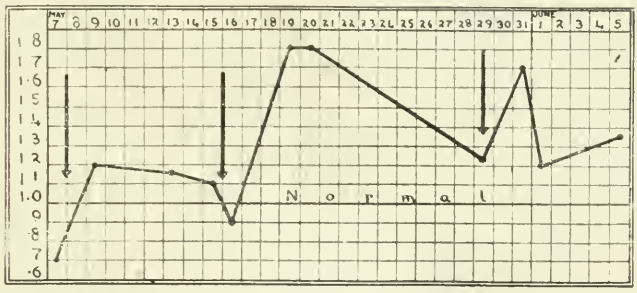

Fig. 4.—Chart referring to a case of tuberculous cystitis showing the variation of the tuberculo-opsonic index as a result of inoculations with tuberculin. The arrows refer to inoculatiens of 1/750 m.g. of tuberculin. Recovery.

more than sufficient theme for an address, but time will only permit me to summarize. I have treated the patients in some fourteen such cases with tuberculin. Less than half were moderately early, the rest were severe. I can only state my belief on this matter, and it is that unless the case be early or moderately early inoculation with tuberculin will be of little or no benefit. As concerns the early cases, however, I hold a contrary opinion, and my belief is that tuberculin is a powerful expedient for good if rightly used. It would be absurd for me to base this opinion on the few cases that I have treated, but Lawson and Stuart, Harris and others have reported a successful issue in a number of cases. Of especial importance, however, are the results of Trudeau and his co-workers at Saranac Lake. After an experience extending over at least twelve years, he is more confirmed than ever in his belief that tuberculin is a valuable remedial agent at least in the early or moderately early cases of pulmonary tuberculosis. Möller, at the Belzig Sanatorium in Germany, is also an enthusiastic advocate of tuberculin in pulmonary tuberculosis.

The streptococcus in one or another of its strains is responsible for many chronic or subacute infections. I have a case of chronic sinus, following on a laparatomy, in which the patient is doing well under streptococcus vaccine. I also had a case of chronic pyemia in which the condition subsided when the patient was inoculated with streptococcus vaccine made from her own micro-organisms. Patients with chronic osteomyelitis and subacute puerperal infections also have been successfully vaccinated. Gonorrheal arthritis in quite a number of instances has responded to a gonococcus vaccine.

Patients with pneumococcus cystitis, empyemata sinuses, etc., have been successfully treated. Cases of cystitis, sinuses, etc., due to bacillus coli have responded to a colon vaccine.

Many other affections due to a number of other micro-organisms have been treated with success, but I cannot stop to consider them. I shall also have to pass over that whole second class of infections to which I referred, where auto-inoculation is the characteristic, and consider for a moment a representative case of the third great class in which are included the septicemias, viz., a case of ulcerative endocarditis.

History.—The patient was a girl under the care of Sir James Barr, in Liverpool. You will observe from a chart (Fig. 5) that she had considerable pyrexia extending over five weeks, before inoculation was undertaken with a vaccine prepared from a streptococcus obtained from her blood. She had had 16 injections of antistreptococcus serum with no good effect. Without going into details it is interesting to note that with the general rise of opsonic power following on inoculations with the streptococcus vaccine there occurred a general lowering of her temperature until normal was reached. The clinical result was very happy, for the patient made an almost uninterrupted recovery.

Before concluding this very cursory consideration of a large subject, I wish to express certain opinions concerning it—opinions founded on over two years of practical experience in the treatment of a considerable number of affections due to a variety of micro-organisms. I may state that I have endeavored to analyze all my results coldly and critically, with a due allowance for coincidence and the intervention of other, though unknown, agencies. Nevertheless I find my belief firmly established that proper inoculation with appropriate bacterial vaccines is a powerful expedient for the cure or control of many diseases due to micro-organisms. To my own mind the evidence in favor of this belief is almost overwhelming. Concerning the relation of the opsonic theory to inoculation, however, there is considerable difference of opinion. I cannot discuss this question now, but my opinion is that though estimation of the opsonic index is often unnecessary, still such investigation has been and still is of great service in enabling us to determine the dosage of a particular vaccine and the appro-

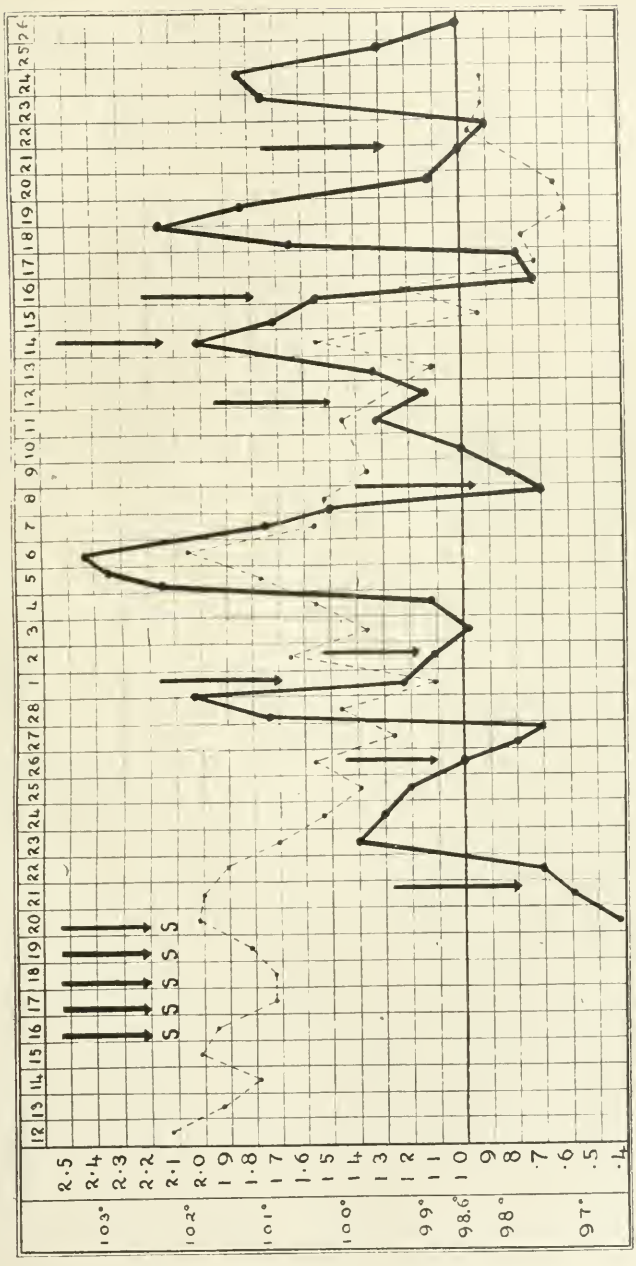

Fig. 5.—Chart (in part) of a case of malignant endocarditis due to streptococcus. The broken line refers to the temperature. The continuous line refers to the streptococco opsonic index. "S" refers to an inoculation with an anti-streptococcus serum. The arrows refer to inoculations with an homologous strep ococcus vaccine. Recovery. (Curve by Captain S. M. Douglas.)

priate time for inoculation and reinoculation when we are in doubt. That the method of estimating the opsonic index is mathematically accurate few would have the temerity to claim, but that it is sufficiently so to serve as a useful guide in the practical application of vaccine therapy to the treatment of disease *few therapeutists* who have used the methods over a sufficient length of time to justify an opinion will deny. As a practical physician, however, I am concerned with the cure or control of bacterial disease, and I am chiefly interested in opsonic methods of investigation because I believe that they do assist me in obtaining a successful issue in certain difficult cases where in default of these methods I could use bacterial vaccines neither safely nor intelligently.

Discussion.

Dr. John C. Holister, Chicago, speaking of the irregularity of the normal opsonic index, gave the results of some investigations he had made during the past eight months. The blood from eight normal individuals was taken, at irregular intervals, sometimes every day, or every other day, with lapses of one, two or three weeks. The results were as follows: Individual 1.—The tuberculo-opsonic index was taken 71 times. Without exception the average of any three consecutive indices lay between 0.9 and 1.1. Individual 2.—The tuberculo-opsonic index was taken 95 times. With one exception the average in any three consecutive indices lay between 0.9 and 1.1. The one exception was 0.8. Individual 3.—The tuberculo-opsonic index was taken 82 times. Without exception the average of any three consecutive indices lay between 0.9 and 1.1. Individual 4.—The tuberculo-opsonic index was taken 51 times. Without exception the average in any three consecutive indices lay between 0.9 and 1.1. Individual 5.—The tuberculo-opsonic index was taken 50 times. Without exception the average of any three consecutive indices lay between 0.9 and 1.1. The average of the averages in these five individuals, covering 71, 95, 82, 51 and 50 examinations, respectively, was 1. Again, the blood from 100 normal individuals was examined and the indices ran, with six exceptions, between 0.8 and 1.2. In two of these exceptions there was found to be a distinct family history of tuberculosis, and also clinical "suspicions" of lowered vitality. Dr. Hollister concluded that if the technic is carried out according to Wright's method, and by capable investigators, or if the technic is carried out by two or more capable persons, the same results will obtain in at least 95 per cent. of cases. Finally, these results will bring the normal opsonic index in tuberculosis between 0.8 and 1.2. If it is found that the opsonic index in three consecutive examinations is below 0.8 or above 1.2, that person's serum is abnormal.

Dr. Willard H. Hutchings, Detroit, agreed with Dr. Ross that

the question seems to divide itself into two parts: First, the therapeutic value of bacterial vaccines, and, second, the question of the relative value of the opsonic index as a method of controlling inoculation. During the past year he has employed bacterial vaccines in a considerable number of cases, controlling their administration by careful estimation of the opsonic index as described by Wright. In his opinion the therapeutic value of bacterial vaccines has been demonstrated conclusively, and the great question at present is that of dosage, the size and frequency of administration of which seems to vary greatly with different individuals. Concerning the value of the opsonic index as a method of controlling this dosage, he is at present undecided. In some cases he has found it of the utmost value and in others it has not served as an accurate guide. However, as Dr. Ross stated, it is the best thing we have at present, and while it must be modified before coming into general use, Dr. Hutchings does not believe that we are justified, at present, in basing the treatment of cases by this method on clinical symptoms. This is particularly true of tuberculosis, where he has found the identical dose produce, at one time, a prompt rise of the patient's resistance, and at another a prolonged negative phase. He has found the negative phase extremely variable, so much so that had he inoculated at regular intervals he would have inoculated during a negative phase. Dr. Hutchings believes that 1-1000 mg. T. R. is too large a dose to begin with, particularly in children, for while it causes a decided rise in the index, later the opsonic producing power seems to be exhausted, and following repeated doses there is no improvement. He begins with 1-4000 mg. or 1-3000 mg., and rarely goes above 1-2000 mg. These doses will practically give rise in the index and the same clinical improvement. The question of the practical value of the bacterial vaccines seems to be clearly proved. In a large majority of the cases Dr. Hutchings found that the autogenous vaccines do better in the treatment of surgical conditions than anything we have had before. But one must not use bacterial vaccines to the exclusion of other methods of treatment. He recalled one case of tubercular tenosynovitis of both wrists which was treated for two months by inoculations of T. R., controlled by the opsonic index, with but little improvement. He then tried Bier's hyperemia with this, and the improvement was rapid and marked.

Dr. George W. Ross, Toronto, Canada, said that he fears greatly that the opsonic theory and vaccine therapy will suffer more from over-exploitation than from conservatism in their application to the treatment of disease. What is most desired, he said, is conservatism, and particularly the use of Sir Almoth Wright's methods by capable men, properly trained for the work. Splendid results in many cases not amenable to the usual methods certainly will be obtained if the treatment by vaccination is thoroughly done.

THE MENTAL OR NERVOUS HYPOTHESIS IN INTERNAL MEDICATION — ILLUSTRATED BY THE USE OF ACONITE AND VERATRUM VIRIDE IN PNUEMONITIS

BY GEO. M. AYLESWORTH, M.D., COLLINGWOOD, ONT.

Gentlemen,—When a man of the calibre of the writer states that in his opinion, with nine-tenths of the profession the therapeutics of internal medication have drifted into a condition of fatuous disuse, it is apt to give rise to hilarity upon the part of the nine-tenths.

But the *British Medical Journal* of October 20, 1906, felt called upon to permit Robert Saunby, M.D., of Birmingham, to point out that Dr. Clifford Allbutt had gone so far as to send a circular to the medical schools, drawing attention to the way in which students write prescriptions at their final examinations, and asking that more attention be given to their instruction upon the point. Dr. Saunby also says: "The conditions may have improved, but nothing could be worse than they were, and if I may judge from our Birmingham students they are little better now. Prescriptions written at examinations are usually clumsy, often absurd and frequently full of verbal and grammatical mistakes."

Editorially in this same issue the journal says: "It is a curious and unsatisfactory commentary on our present system of medical education that while it concerns itself seriously with the tuition of students in the preliminary sciences, yet in the two great subjects of applied therapeutics and dietetics, it turns them loose on the world of disease without having taught them how to write a compatible and well-arranged prescription." All of which indicates that the laughter of the nine-tenths is that of those whose lack of knowledge prevents their realizing the serious nature of the situation.

It is difficult to see what good is attained by the time and labor expended in acquiring medical knowledge if effort ceases when a diagnosis is made, or, as the journal puts it: "Since the prosecution of medical study is, to the large majority of those who engage in it, an acquisition of brain capital, on which they hope to earn an adequate return from subsequent practice, it is obviously a serious flaw in our plan that the subject upon which, beyond all others, the financial rewards of the practitioner depend, should be so neglected that on no other which enters into his curriculum is the newly-fledged doctor so badly informed." Confirmation of this want of knowledge of applied therapeutics from journals on this side of the Atlantic could be supplied *ad lib.*,

but it is doubtful if it would add to the impressiveness of the statements of the monument of medical conservatism just quoted. Seemingly, from the standpoint of the profession, it would be wise to discontinue the "ostrich act" and face the situation, lest a worse thing befall us. The writer thinks our leaders may be justly charged with endorsing remedies before their experience has given them that right, and that they are prone to adopt suggestions, backed by great names, as true. As an instance, during the last twenty-five years, an immeasurable amount of effort has been put forth to find an ideal microbicide which will act as well within the living body as it does in a test tube. Notwithstanding the great discoveries (?) announced from time to time, this search has proven almost wholly futile through a well-known fact having been ignored. That is that microbes are unable to injure the body when it is in a condition of perfect health. This will hardly be questioned by the thoughtful and if properly appreciated forms a sure foundation for a therapeutic hypothesis. Perfect health means perfectly normal minds and nervous systems, involving perfect co-ordination of functionary organs. No matter what powers cells individually or collectively may possess, the minds or nervous systems, whatever else they may be, are the supreme agent in co-ordination during life. In support of this contention, I briefly submit well-known facts as evidence. It is claimed that the mind or minds and nervous systems, whatever else they may be, are the supreme agents of organization during life. The vascular system is largely controlled through them, as shown by the flush of anger or pleasure and the pallor of terror. Over and above their direct control of both forms of muscular tissue, the minds and nervous systems, while profoundly dependent upon the vascular system for their integrity, regulate the quantity and quality of the blood delivered by it to the various organs. In this way they control the functions of the intestines, the kidneys, the genital organs, etc., etc., and decide whether there shall be congestion or a normal flow, inflammation or stasis in their respective bailiwicks. The minds, whether they are the nervous systems themselves or separate entities, utilize the latter for issuing and carrying out the orders they formulate, and have vastly more control of the inception and cure of disease than they are commonly credited with. Dr. Clifford Allbutt says it is an undoubted clinical fact that granular kidney is often produced by prolonged mental anxiety. Sir George Paget says: "In many cases I have reason for believing that cancer had its origin in prolonged anxiety." Sir B. W. Richardson says: "Eruptions on the skin will follow excessive mental strain. In all these, and in cancer, epilepsy, and mania from mental causes, there is a pre-disposition," and adds: "It is remarkable how little the

question of the origin of physical diseases from mental influences has been studied."

This evidence will suffice upon this point in etiology, though it could be multiplied indefinitely.

We all have the cure of disease through the minds and nervous systems forced upon our attention continually by the ubiquitous healer and patent medicine advertisement, and most medical men are awake more or less to the power of suggestion and have had personal experience with such cures incidentally. But the enormous independent powers of the mind and nervous system are so constantly in evidence, our familiarity with them prevents our learning the lessons they should teach. The older profession had a name for these processes very difficult to improve upon—*vis medicatrix naturae.*

As instances we have vomiting and diarrhea to remove indigestible substances and anorexia to prevent their ingestion and secure physiological rest. We have phagocytosis and the walling off of abscesses as prophylactic processes, we have the formation of callus in fracture, and compensatory circulation, as specimens of cure by organic change, while the rise in temperature which destroys toxins, its reduction by perspiration when not needed, the relaxation of arterial walls and depression of circulation to relieve distention in cardiac dilatation, may be classed as cure of functional disease by the inherent powers of the organism itself. In this connection Sir Lauder Brunton's question, "How is it the ferments which form poisons do not pass into the blood and kill the animal?" is of interest and might be supplemented by the question, How is it the omnipresent pathogenic germs permit us to live at all?

We know nature is replete with forms of life, from the largest to the smallest, and all are dependent upon their inherent vitality and upon the varying conditions of their environment. The lower forms thrive, shrivel or die, as the case may be. Man thrives, shrivels or dies, as the case may be. Nature, or if you prefer it, nature's God, never intended man's body to be the dwelling-place of other forms of life for the purpose of destroying it. But if from any cause his body deteriorates, other forms of life invade it, to act as scavengers, but in doing so are liable to increase the difficulty. If his body is not deteriorated, these scavengers have no office to perform; the environment within the body does not suit them, so that if they are able to exist after having succeeded in entering it, they are powerless for harm. This seems a good answer to the foregoing questions. Merely killing these scavengers by germicides does not render the body any more competent to repel a new set of invaders, nor thwart nature's intention to destroy that which has become unfit for life.

So that while searching for such germicides may be highly commendable, it seems wise to increase our efforts to remedy the deterioration of the body, which enables the scavengers to thrive therein. To return to the force we have been discussing (no matter what it may be called), which does such wonders in producing, protecting from, and curing, disease, it is the power of organization possessed and used by our minds and nervous systems?

As a corollary, a departure from the norm must be present in the minds or nervous systems before disease can show itself and broadly speaking this departure must be an excess, deficiency or variation of this force, *vis medicatrix naturae*. The diagnostitian who can decide which of these variations is present in a given instance should be a good internal medicationist, because emetics, purgatives, expectorants, diuretics, diaphoretics, heart tonics, depressants, etc., are numerous and efficient if we had the prescience of which one is needed and their action when administered. The effects obtained from these drugs are due to the variations in the vascular supply to the various organs. It has been shown that the vascular supply is under the constant supervision of the mind and nervous system, enabling it to meet not only the ever-varying needs of the body in general, but each organ separately. The physiological text-book theory of a mechanically self-acting force-pump, associated with a system of elastic tubes, seems absurd in the light of the fact that many miles of capillaries instantaneously dilate or contract in response to orders distributed by the vaso-motor, pneumogastric and other nerves, without our consent, but in obedience to our subjective mind, to meet needs of the body which the objective or conscious mind did not know existed. The heart is under the same control, aided by a ganglia of its own and its action varies with almost every movement of the body and every emotion of the mind, unless the nervous control is extremely prompt and efficient. This control is so completely organized that it is consistent with perfect health to have more blood present than when the organs are quiescent in two or more of them that may be functioning at the same time.

As an instance of how this hypothesis works out in practical therapeutics, let us take the action of aconite and ver. vir. in pneumonitis as an example, the more so as we have had, and have even now, its treatment under review. Hare, in "Practical Therapeutics," quotes with approval Woods' summary of the effects of ver. vir. on the circulation from a study of its alkaloids: "Veratrum viride slows the pulse by a direct depressant action on the heart muscle (jervine) and by stimulating the pneumogastric nerves (veratroidin). It lowers blood pressure by an action on the heart muscle (jervine) and by depression of the vaso-motor centre (jervine)." With this clear statement of the

depressing action of ver. vir. all writers consulted agree, though many cover it with much verbiage. We are thus enabled easily to formulate the indications for its use, though Ellingwood makes the most accurate and concise statement thus far met with: "Sthenic fever, with large, full, bounding, fast pulse, with high temperature, engorged capillary circulation; at the onset of acute local inflammation, in previously strong patients; in acute convulsions, with high temperature and rapid pulse." But when aconite comes "upon the carpet" authorities are neither so unanimous nor clear, but remind one of the attitude of the profession towards the physiological action of alcohol, which for years has been an *approbrium medicorum.* Ellingwood's indications for the use of aconite are: "Sthenic fever, with sharp, hard, quick pulse, dry hot or burning skin, at the outset of acute fevers, in the early stages of acute inflammation, in the developing stages of the exanthematous fevers." No objection can be made to this, except the misapplication of the word sthenic, which is made by many authorities, to the great befuddlement of themselves and their followers. Sthenic and asthenic are words descriptive of two diametrically opposed conditions. Reading the foregoing indications for ver. vir. and aconite we have opposite conditions, but both called sthenic, whereas the indications given for ver. vir. are a description of powerful and effective cardiac action, while for aconite you have an excited but feeble and abortive cardiac action. So that if one depends upon such instruction, he will be some time learning when one should be used to the exclusion of the other. As evidence that such instruction is not a myth, you will find Wallace G. Abbott, of alkaloidal fame, as late as September, 1907, advocating in his journal the use of his defervescent compound, made up of *aconitine* digitalin and *veratrine.*

If the practitioner once fairly grasps the truth that ver. vir. is a depressant of the circulation first, last and always and aconite a stimulant, their use becomes to him easy and efficient, not only in pneumonitis, but many other diseases. Hare goes so far as to say that after the stage of hyperemia or congestion is passed the use of ver. vir. is not only valueless, but malpractice. In saying this he goes too far, for no matter what the stage of the disease, ver. vir. is of the greatest benefit when Woods' indications (which Hare endorses) are present.

With our present knowledge, it seems peculiar to have Hare assert that aconite in moderate doses slows the heart by stimulation of the vagus centres, and almost immediately; that from large doses the pulse becomes more feeble and slow from depression of the vaso-motor centres, and if the dose be poisonous the heart is paralyzed. My contention is that the symptoms induced

by large doses of aconite are due to over-stimulation, even unto paralysis, and to call this action a depressing one is a misnomer and the cause of much bewilderment among the thoughtful. The same misuse of words occurs with other drugs. As an example, strychnine is regarded by the profession as the purest stimulant we have, and yet Hare (I select Hare because if not the greatest, he is one of the greatest authorities) deliberately says, as to the influence of strychnine upon the circulation, "Nux vomica increases the force of the pulse beat and pulse rate by a stimulation of the heart muscle and its ganglia, while the rise of arterial pressure which it causes is due to stimulation of the vaso-motor centre. If very poisonous doses are injected intravenously, a fall of arterial pressure occurs instead of a rise, which is due to vaso-motor depression and paralysis." To my mind, this establishes my contention as far as one authority can establish anything, and there is no lack of authorities would time permit reference to them. It certainly seems as though he possessed an enviable self-satisfaction to enable him to write, almost immediately after muddling us in reference to aconite, "Aconite's effects are uniformly explainable by its known physiological action." And then, "It is of great value in the earliest stages of sthenic pneumonia if great arterial excitement is present." If he means by "arterial excitement" the large, full, bounding, fast, efficient pulse, he is as wrong as possible, for this condition, no matter what the disease may be, is remedied by large doses of ver. viride and made worse by aconite. But if he means the sharp, hard, quick, inefficient pulse, he is right in recommending aconite in the minute dose in the condition whenever found, but wrong in calling the condition sthenic.

It remains for me to justify my insistence upon a different dose for these two drugs to secure a similar result. It is explained in a word by saying they are used to bring the circulation to the norm, but from opposite directions, so that to force the pulse down ver. vir. should be given in the first instance in a medium dose, and if the indications are present and its effect not gained, the dose should be increased until it is. On the other hand, to bring the pulse up to a point where the circulation is made efficient, aconite in a very small dose should be used (1 gtt. of the tinct.), and if the indications are present and the effects not obtained, the drug should be withdrawn for three hours and then given in much smaller doses (1-10 to 1-30 gtt.). Hare also says aconite ought not to be used in adynamic or asthenic affections. I have used it daily in such affections for years without many failures to securing benefit; the one thing needed is a dose small enough. The homeopathists have used it in this way with great success for 100 years.

When I began to practise, I used aconite as instructed, in doses of 5m. of the tinct. of the root and ver. vir. in maximum doses of 5 min. of the tinct., without any very clear ideas as to when either of them should be given or withheld. My success was so poor that I ceased using them. But when persuaded that ver. vir. is a depressant only and aconite a stimulant only, any symptoms of depression induced by the latter being due to over-stimulation, as also occurs with strychnia, I began to use them again.

It is now a good many years since I exceeded 1-6th m. dose of aconite and placed the maximum dose of ver. vir. at 20 m. My success leads me to persist in their use on these lines and any success I may have had as an internal therapeutist I ascribe to the adoption of the foregoing principles, not only in pneumonitis and with ver. vir. and aconite, but when my studies, experience and resultant knowledge enabled me to apply them with success in other diseases and with other drugs.

With drugs of known and uniform strength and these principles clearly understood, I have eliminated the uncertain and unknown, except the patient and his condition, and the therapeutics of internal medication has become for me a fascinating study and the worst wish I have for any of you is that you may go and do likewise.

Gentlemen of the Association, in handing back into your keeping the presidency you were kind enough to confer upon me, I would say I can see no reason why one or more of our members should not evolve ideas that would have a wide effect upon the profession at large, for I would impress upon each of you that initial steps in progress are quite as frequently originated in the minds of the almost unknown, often during his solitary rounds, as in the minds of those who have become widely known.

In evidence I would instance Jenner's vaccination, McDowell's ovariotomy and Woodbridge's treatment of typhoid fever. Each man an obscure country practitioner, each idea revolutionary, and each carrying the profession a long step towards the fulfilment of its mission to suffering humanity. In conclusion, I feel honored by having been permitted to preside over your deliberations. And inasmuch as I hold views which I have not endeavored to hide, that some regard as radical, erratic and possibly off-color, I think you have honored yourselves, not because of my merit, but because you have shown you have enough independence and breadth of mind to select a free lance in word and deed, as well as in thought, to serve in the highest office in your gift. Gentlemen, I thank you.

THE LOCAL TREATMENT OF RHEUMATISM.

BY E. R. HUTCHINS, M.D., DES MOINES, IOWA.

In the treatment of rheumatic affections local measures have always played a more or less important part. While some favor the use of heat, others prefer the application of cold to the affected joints, although probably hot applications are much better tolerated by the majority of patients. It must be confessed, however, that most of these measures are only of limited usefulness, since many patients object to the frequent renewal of the applications required to produce any prolonged action, owing to the accompanying discomfort in handling the affected parts. Then there is another series of local remedies which have been applied chiefly for their counter-irritant effect, but except in chronic cases they sometimes—and not infrequently—make matters worse on account of the irritation and soreness following their use.

Various salicylic acid preparations have been employed from another point of view, namely, that of causing the absorption of this drug, and thus directly aiding the internal treatment, as, for instance, the oil of wintergreen and ointments of salicylic acid. It has been shown, however, that unless these are vigorously rubbed in—and this is out of question in most acute cases—only very little of the drug is absorbed. For this reason attempts have been made to obtain some form of salicylic acid which would readily penetrate the skin and thus act directly upon the affected structures, whether the joints or muscles. The only way of determining whether such absorption takes place is to employ them alone, and then test the urine for the presence of salicylic acid.

Abundant evidence has now been brought forward to show that the methyl-oxy-methyl-ester of salicylic acid, which has been introduced under the name of mesotan, fulfils this requirement, and my experience with the remedy proves that from a clinical standpoint mesotan is not only absorbed, but also exerts a pronounced salicylic acid action in the system. I have had an opportunity to try this drug during a number of months in a careful and faithful way in cases of acute and chronic articular and muscular rheumatism, and have thought it of interest to present the histories of a number of cases treated by me which I think prove the efficacy of this remedy.

Case 1.—Mr. E. H., aged 62, thirty years ago suffered with a prolonged and serious attack of acute articular rheumatism which involved his heart. He had serious endocarditis. This condition continued for more than a year, and then he was left with painful sciatica. Attacks of this type of rheumatism came

on at intervals and lasted from four to eight weeks, and such had been his life for the last twenty years. Careful investigation of the history of the case proved conclusively that the disease was rheumatic in origin, which is by no means always the case. He had taken salicylates, digitalis and colchicum until the digestive organs were showing their deleterious effects. Apart from this sciatica the man's general health was good. When I first saw him he was suffering from an acute attack of sciatica; pulse 86, occasionally intermittent. I immediately applied (and did so personally) three drams of mesotan with two of olive oil, rubbing it in gently and for a long while along the course of the sciatic nerve. Relief followed the first inunction. I kept this up for twenty-two days, twice daily, suspending it but twice in that time and only for twenty-four hours each time, and used no other remedy whatever. Gradually the pain ceased, the man felt more hopeful each day, and at the end of the twenty-second day he was well and walked as sprightly as if he were forty. He claimed that he had not felt so well for twenty years. This was more than three months ago, and he has not had the slightest pain.

I have tried mesotan in three other cases of sciatica with the same results in two of them, although the disease was not of such long standing. In the third case it was a partial failure, but the patient is still under this treatment.

Case 2.—Miss K., aged 24, was attacked with acute articular rheumatism of both wrist and finger joints. Much pain, considerable swelling, pulse 94, temperature 99 degrees, bowels constipated, kidneys normal. A brisk saline was given which acted promptly, and she was put on light diet. I freely applied mesotan with no dilution, rubbing it in very gently. This was repeated in six hours. The patient was relieved from the first. After the second inunction I mixed the mesotan with an equal quantity of olive oil and applied this three times a day. She steadily gained, and in one week the wrists and fingers were in normal condition and the patient was well. This was a most rapid cure. The patient had been subject to attacks of acute rheumatism for five years, and had used various baths, an endless number of different external applications, and taken salicylates until she could bear them no longer. I have seen her several times since, and she has continued well.

At the same time I had cognizance of four other cases of acute rheumatism, one in a child and the other three in adults, and all were cured by the mesotan treatment only.

Case 3.—Mr. L., aged 31. Chronic rheumatism of both ankles. No swelling; slight increase of temperature; pulse 88 and a little jerky. General health fairly good. A good deal of pain, increased by standing or walking. His occupation was that of

a writer, and this greatly increased the pain. His gait was unnatural, walking almost as if he had the rickets. There was a tendency to arthritis deformans. I applied two drams of mesotan, mixed with the same quantity of olive oil (again doing it myself), night and morning, rubbing the ankle joints gently but for a long time. He did not experience any relief, apparently, during the first twenty-four hours. On the morning of the second day he noticed a very slight diminution of pain, and was hopeful, and for six days the improvement continued, though very slight, but there was much more mobility in the joints, which was most encouraging to both physician and patient. I stopped treatment for twenty-four hours, and again commenced the inunction with the mesotan diluted with olive oil, every morning and evening for three days. The pain had materially subsided and the mobility of the joints had further increased. A slight erythematous eruption was noticed on the ankles, extending up both legs, and a cessation was again had for twenty-four hours and the applications then resumed. For a week the disease seemed very stubborn, little, if any, improvement being observed, yet all the time the patient declared that he was better, and insisted that he could walk with more ease. The case was one of such long standing, and the enormous quantity of drugs he had taken prompted the most minute and careful observation. No improvement had occurred under all this prior treatment, hence the slightest impression that mesotan was making upon the disease was hailed with delight. The pulse remained at about 88 and was still jerky, especially when the patient exercised. He had now been under treatment two weeks, and I determined to continue the mesotan, but to employ aspirin as an adjuvant. I commenced with ten-grain doses four times a day, and on the third day increased it to twelve grains. The inunctions were continued faithfully. At the end of the fourth day the pain had diminished perceptibly, and this treatment was continued for three weeks more—the mesotan steadily, with the exception of two intervals of but twenty-four hours each. The pain had almost entirely subsided, the temperature was normal, the jerky pulse had disappeared and it was regular and 79. That the aspirin had joined hands with the mesotan, and that the combination was acting efficiently, could not be doubted. But the most encouraging feature was the decidedly increased mobility of the joints. The dose of aspirin was cut in two, and the inunctions were continued. There was no sign of erythema. This was the twenty-fifth day. On the twenty-eighth day aspirin was stopped altogether, and but one inunction was employed each day. This treatment was continued eight weeks. The patient was not perfectly well, but his pulse was 76, heart action perfect, no pain when quiet, and but little when exercising.

The patient was then given a bottle of mesotan mixture, with directions to use it once daily. A few days ago he wrote: "I do not use any more of the oil, nor any medicine whatever, for I am well." This case is especially interesting from its long standing, its slow yet sure yielding to treatment, from the steady improvement in the movement of the joints, and from the disappearance of all heart disturbances. Here was a man who had taken the salicylates until his digestive organs were in a serious condition. The irregularity of the heart action had come on after these remedies had been given faithful and prolonged trial, suggesting that while they may be considered alleviators of pain they unquestionably brought about or aggravated his cardiac complication. In this case the aspirin supplied the place of the salicylates to an extent, but the value of mesotan cannot be too highly estimated. This case was of eleven years' standing.

Case 4.—Mr. E., aged 63, had lumbago in its most acute form. On stooping over and attempting to rise he would shriek with pain and almost fall forward on his face. In bed he could turn in no direction without great agony. Mesotan without dilution was employed by inunction, and relief followed the first application. Three applications were made daily, and on the evening of the third day the patient was completely cured.

I used mesotan in three other cases of lumbago in adults this summer and fall, and in each case the results were the same as in the preceding one.

Case 5.—Mrs. B., aged 32, stenographer. This was a case of singularly severe torticollis. The neck was greatly twisted, and the pain on the slightest movement was most excruciating. She was totally disabled from work. The relief from one application of mesotan was quite plain. Three applications were made daily, and on the morning of the third day she was perfectly well and at her work.

A lad of fourteen was afflicted with the same ailment at the same time, and after mesotan had been applied three times he was also cured.

There can be no question of the efficacy of mesotan in rheumatism. Perhaps its effect is more quickly seen in cases of muscular rheumatism, but it unquestionably is of great value in all forms of the disease. I have had no bad effects from its use, and yet I have employed it two and three times daily on patients for weeks at a time, discontinuing its use seldom, and, when so, for only a day or so at a time. The utmost care should be used, it seems to me, in its application. The rubbing should be of the gentlest kind.

Selected Articles.

AN ADDRESS ON INHALATION.*

BY ARTHUR FOXWELL, M.D. CANTAB., F.R.C.P. LOND.,
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Gentlemen,—Perhaps we prescribe few things more ignorantly than an inhalation; the nature of the drug or drugs chosen we may take the trouble to indicate, but who amongst us knows the strength of the actual inhalation or what change must take place in that strength ere it reach the lung alveoli. Moreover, our directions as to the method of employment are often vague: how much and how hot should be the added water, how long should each treatment last, how often should it occur. The fact is, we are half-hearted in our belief of its efficacy and so take but little interest in its administration. I think the advent of the throat surgeon is the chief cause of this; we can see, without much thought, the result of his labors and so gladly hand over to him conditions we previously treated by the slower and more doubtful method of inhalation. If this were all I should not greatly complain. But unfortunately we hand over not only the local but the constitutional treatment; this means—and small blame to the surgeon—that the constitutional treatment is to a large extent neglected, with the consequence that the patient remains for years in the hands of his local ameliorator till such time as his *vis naturae* may choose of herself to bring about a betterment of his constitution. For the greater proportion of these naso-pharyngo-laryngo-tracheal conditions are constitutional. The local trouble is merely the maximum expression of a dyscrasia which exists throughout the body and can there be detected by the painstaking physician, though the symptoms may be so vague and indefinite that they pass unnoticed by the patient himself.

The real source of the trouble is often not in the local mucous membrane but in the nutriment supplied to this by blood and lymph; perhaps these fluids are themselves deficient in nutriment, as in the anemias, the gouty diathesis, or chronic renal disease; or, though not deficient in nutriment, they contain irritating material, as again in gout and renal disease or in gastro-intestinal catarrh, these producing a hyperplasia of connective tissue throughout the body, one of its local expressions being hypertrophic rhinitis, pharyngitis, or laryngitis; or, though the

* Delivered before the Midland Medical Society.

fluids themselves are fairly healthy, the vasomotor control is imperfect and the tissues lie too long soaked in venous blood and used-up lymph; or, lastly, there is feeble action of the governing system, there is nervous debility or acute prostration, the stimuli have lost their energy and directness of command, with a resulting inertness and flabbiness of the stimulated tissue, a granular and edematous pharyngitis resulting. The special surgeon may say that, while removing the local trouble, he in no way forgets the constitutional dyscrasia and is as competent to treat it as the physician. He may be, though I do not think he is; but whether he be so or not his patient does not believe him to be so. Not seldom I have had patients who have been to such a surgeon, have reaped much local benefit at his hands, have trusted greatly in him, and have persistently continued the local medicament he prescribed, but have omitted altogether, or very soon, his general treatment, supposing it was not likely to be of much benefit as it "was not in his line." This is one of the curses of specialism.

The layman supposes that if there is any local anatomical *abnormality* then the local malfunction must necessarily be due to this. Are we always careful to point out that though it may increase the malfunction it is very rarely its cause? Do we not too readily allow the sufferer, eager for relief, to submit to the removal of the abnormality with but a temporary improvement, perhaps none at all, or, may be, speedily followed by an exacerbation of his condition? Do we always insist upon explaining that his abnormality existed years before his malfunction, was perhaps even congenital, and that if only the malfunction can be otherwise remedied he will again cease to observe it? Yet I am convinced that in most of these cases the correct treatment is to endeavor to relieve the constitutional condition which has caused the local trouble, and then, if you like, remove the cause which has rendered the locality peculiarly susceptible to the dyscrasia. And why? First, because it is never right to allow a patient to continue with any dyscrasia if it can be remedied; it is our duty to remove him from this danger zone, where he is constantly liable to attack, and place him in a condition of good natural resistance. Secondly, if an operation should then prove necessary, it is more likely to prove successful than if attempted when he is functioning badly. Even in war we try to remove our wounded from the danger zone to the field hospital before we operate, and, I understand, our civil surgeons prefer to wait till the patient be in the best possible condition physiologically before they undertake a serious operation. Thirdly, we must remember that in most of these nasopharyngeal operations a raw surface is left bereft of mucous membrane. We hope that healthy mucous membrane will in time cover it. What chance is there of this if the neighboring

mucous membrane be unhealthy? If it should succeed in covering it with unhealthy membrane like itself the old condition will soon reassert itself, but more probably a scar tissue will be left as after a skin burn and, like this, incapable of taking on healthy action, so that the result in either case is merely temporary amelioration, the patient becoming a lifelong visitor to his surgeon.

It may be objected to me that results are not so gloomy as my remarks would suggest. I must say they thoroughly bear out my own observations, but then, perhaps naturally, I am more likely to see the surgeon's failures than his successes. I will take, therefore, the records of the surgeons themselves. Let us take nasal asthma.

Out of 313 cases of nasal asthma* recorded by Hack, Hering, Lublinski, Sommerbrodt, Bosworth, and Roé, 150 are reported by these surgeons as cured and 40 others as improved. But I think we must be rather guarded in accepting these numbers; anyone acquainted with hospital statistics knows how rosily the surgeon anticipates the distant future, provided the immediate result be good. One of the authorities I have quoted—Roé—accentuates this view by pointing out that of his 35 cures 17 have remained well for more than one year; or, to put it my way, 18 of his 35 cures relapsed before the year was out. If his statement should prove true of the others then the cures would only reach 25 per cent. But let us put them at 33⅓ per cent. A method which cures for over a year one-third of the cases of nasal asthma is one which we must respect, for this result is a good one. Yet the most enthusiastic of these surgeons admit that there is one grave drawback to operative procedures: some of the cases, and not seldom some of the slighter ones, are made worse. This is a very serious objection, and it is one that impresses itself most upon my mind, for it is just these which come back to the physician.

The physician's methods, if slow, ineffectual and undramatic, have, at any rate, no such drawback. That they are slow I grant, and, therefore, to the gasping hurry of this twentieth century must seem undramatic. But I cannot admit the ineffectual. I certainly think he can claim one-third of his cases as cures of more than one year's duration. I believe he could say one-half. But it is also quite true that some which he cannot cure temporarily or permanently will speedily be cured by the surgeon. I do not think the proportion is large, perhaps 10 per cent. They are the cases where the local cause is a gross one and the constitutional enters little, if at all. I have said the physician's method has no drawback. It has, on the other hand, the great advantage

* L'Asthme d'Origine Nasale, de son Traitement par les Eaux d'Uriage. Par Francoi Teulow-Valio, M.D. Gustave Firmin et Montane, Montpellier, 1898.

of putting the patient on a healthy basis generally. Indeed, often the constitutional is the only treatment needed. Let me instance a case. A mother brought her little boy, aged four years, complaining that he daily suffered from violent attacks of sneezing which left him prostrate. I concluded that he had nasal asthma, but found he had also gastro-intestinal catarrh and nervous irritability. I did not examine his nose nor did I locally treat it, but cared for his body generally. He came again with his sneezing but little better, but I still refused to heed it and his mother took him away sorrowfully. By the next visit she had evidently come round to my view, for she said nothing about the sneezing, contenting herself with remarking that the other symptoms were greatly improved. The tables were turned; it became my duty now to inquire minutely after the sneezing and to find that, though he still occasionally sneezed, yet all the paroxysmal severity had vanished. Nor did it recur during the few remaining months she thought it necessary to bring him to me. But what I particularly wish to point out is, that the result was not only a better nose, but a better child altogether—body, mind and spirit—than when he first came to me, the better nose being merely an incident in the general amelioration.

Another instance. A man, aged 42 years, came complaining of a troublesome, racking cough which kept him awake, wore him out, and was accompanied by thick, yellow, blood-stained phlegm. His lungs were healthy, but his pharynx was velvety, with edematous granulations. I found he was alcoholic. His liver was firm, large and congested; his heart was dilated and feeble; and his kidneys passed urine excessive in quantity, of low specific gravity, and with a too small excretion of proteid waste. He had slight general anasarca. I gave him some chlorate of potash lozenges to satisfy his mind but otherwise disregarded his throat, feeling sure this would recover long before his heart and moral fibre were fit to run alone. And that is what has happened. At his last visit his cough was not worth mentioning and he had hoped I should bid him good-bye, but his heart was only slightly better, though the anasarca had gone, and he still looked at me with the pitiful eyes of moral instability. So I continue to keep him in tow with threats of pharyngeal relapse till heart-muscle and nerve-cell are stronger.

What has all this to do with inhalation? A great deal, I think. Inhalation often fails, just as operative procedures do, because we trust to it alone; and often the local disease can be remedied without the aid of either. They are both limited in their scope, and are but the handmaids of constitutional measures. If the lesion be gross and limited, *e.g.*, a polypus, operation is the better maid; if it be widespread, though mild, inhalation is to be preferred. In thus pointing out how limited its scope and how

often it is needless, I think I have said one-half of what I want to say on this subject of inhalation.

It is not only surgical methods which have improved during the last forty years. The methods of inhaling have made equal strides. Perhaps the greatest was the introduction of atomization, which enabled us to do away with the relaxing effect of steam. Another great development is the institution of inhalation chambers. If these rooms, full of medicated air, could only be generally distributed, I believe inhalation would at once take a front rank amongst our curative efforts. At Marlioz, close to Aix-les-Bains, is a large room of this kind, some 60 feet by 30 feet, supplied with tables, chairs, and lounges, where invalids can go and chat, stroll up and down, dream in easy chairs, read books of their own or the news of the day in the papers and periodicals on the table, write their letters or prosecute their studies. Each half hour or so everyone is turned out to wander a few minutes in the beautiful park whilst the room is thoroughly ventilated. In this way the patient can inhale for hours a day, without any effort on his part, the medication necessary for his nose, his throat, his windpipe, and his lungs. Allevard* is perhaps the headquarters of this method. As long ago as 1852 Dr. Niépce noticed that the patients used to go up to the galleries of the establishment, where the sulphuretted hydrogen was in greatest percentage, as they found the atmosphere most alleviating there. Hence in 1852 he devised inhalation rooms, both cold and hot. There are seven cold rooms, each 20 feet high by 20 wide by 24 long. In the centre of each is an ingenious apparatus for forming a huge spray of the water. The sulphuretted hydrogen is thus disengaged and mixes with the air. Before being sprayed the water contains 24 volumes of sulphuretted hydrogen per 1000, but when it leaves the room it only has 1 per 1000. The *séances* here, too, last half an hour. At their commencement there is very little H_2S in the air, but before they end this mounts up to 19 volumes in the 1000. Four other rooms of the same size are set apart for warm inhalation. There is the same central arrangement for distributing the gas. Around it the seats arise in tiers. Beneath each tier the floor is perforated and through the perforations immense volumes of H_2S vapor at from 80 to 86 deg. F. pour into the room. Patients take off their outer garments and sit in waterproof gowns for from 25 to 50 minutes. They then rest, dressed, for from 15 to 20 minutes in a room of intermediate

* Allevard is a little manufacturing town of 3,000 souls on a small branch on the south side of the main line between Chambery and Grenoble, 1,500 feet high. Its water contains 2·4 volumes per cent. of sulphuretted hydrogen gas. Apart from the H_2S the water is a very pure one; in fact it is nearly identical with the sulphur water of Llanwrtyd in Brecknockshire, a village of 700 feet above the sea. Both have but little smell or taste of sulphuretted hydrogen, and both are largely drunk by the patients. But whereas at Allevard inhalation is the chief means of medication, at Llanwrtyd this means does not exist. Moreover, Allevard has a theatre with a play every evening, and a very fair band plays twice a day. Llanwrtyd holds out no such attractions. Allevard has sunshine. Llanwrtyd beauty. Llanwrtyd has the better baths; both have excellent hotels.

temperature and finally harden off in one of the cold rooms. They, in fact, give their respiratory lining membranes a sulphur Turkish bath. This seems to me to be the method of inhalation *par excellence;* I cannot see why it should not be adopted at, say, the sulphur spas of Askern, Harrowgate, Llanwrtyd, and Strathpeffer. I am sure the British would take to it kindly and many would rejoice at not having to leave Great Britain. The only instance that I know of a similar installation in England is the creasote room at Brompton. Dr. Hector W. G. Mackenzie has kindly written me this description of it: "The room at Brompton is a fairly large one, about 12 feet by 16 feet and 12 feet high. The creasote vapor is produced by heating about two ounces of coal-tar creasote in a metal dish over a lamp placed on the floor. The room is made, as far as possible, air tight. The patients put on cotton overalls and wear eye-protectors. A covering is also worn over the hair. It is advisable to put cotton-wool in the ears. The patients sit on stools or chairs. The lamp is not placed under the creasote until the patients are settled in the room, so that they get the vapor gradually mixed with the air. The average duration of a *séance* is half an hour; at first shorter, afterwards longer, possibly an hour or an hour and a half. The treatment is repeated as a rule every day, but occasionally I have had it given twice a day. Bronchiectasis is the only condition which seems to derive benefit from it, but in that the benefit is usually very marked."

Coming now to the ordinary local inhalation, here again we see things undertaken much more thoroughly abroad. Each patient has his own private coupé, but the water, air, or steam is supplied to all from one source. Speaking generally, at the sulphur spas of Challes, Marlioz, Allevard, and Uriage pulverization, or, as we call it, atomization, of the water is the only method used. There are three varieties. The first is called "brisement," where the water is broken up by impinging on a metal surface. It is previously forced into a sphere under a pressure of 15 to 20 atmospheres; thence it comes with great force through a very fine agate or ruby nozzle with a lumen of one-fifth to one-tenth of a millimetre in diameter. The metal surfaces on which this fine jet forcibly impinges are of three kinds: (*a*) A tambour. This is a small hollow cylinder about one and a half inches long and three-quarters of an inch in diameter. This cylinder is hinged on a metal stalk, which in its turn is fixed into a solid earthenware foot some three inches in diameter. The jet enters one end of the tambour, is so directed that at the centre it impinges on the concave surface, is at once broken up, and issues in a cloud of the finest dust at the other end, the circumference of this end cutting off the outer portion so that a comparatively small, fairly cylindrical column of atomized water having a considerable velocity is the result. This tambour form is used for throat and

bronchial inhalation (oral), as the whole of the column can enter the mouth without wetting the face. (*b*) A palette. This is a small disc of metal which replaces the tambour. It has a spray which radiates more widely than that from the tambour; it is used for skin eruptions, conjuctival or nasal troubles, and can be placed close to the diseased spot. (*c*) A tamis, or fine meshwork of platinum, through which the jet forces its way and is broken up in so doing. The resulting spray is a much coarser one than by either of the other methods, and as far as I could see is not much used.

Another variety of inhalation is that where the fluid is drawn up and atomized by a jet of steam, a warm cloud of particles resulting; this is used a great deal at Challes and Uriage. Lastly, there is the variety so commonly made use of on a small scale in England where an air jet draws up and atomizes the fluid. But with us the force of the air jet depends upon a small rubber bellows worked by the patient himself; at foreign spas this work is done for everyone by a common force which is always acting. For sulphur waters this method is not available, as the jet of air speedily decomposes them. Here again, in the matter of these local inhalers, we see how abroad they make things as easy as possible for the patient. It may seem a small matter whether you blow your own bellows or not; and if the inhalation is to be for five or ten minutes only perhaps it is not of great importance. Yet we must remember that our inhalers are invalids to whom every exertion, mental or physical, is something of an annoyance.* But it is just these prescriptions of five and ten minutes which seem to me to be a mere playing with this form of medication, a species of quackery. What can you expect from a medicament which only acts for one-seventieth of the day. The inhalation bathes an excreting, not an absorbing surface, so that we cannot suppose that its action can continue for long after the inhalation has stopped. Cells so essentially scavenger-like as are the ciliated cells of the bronchi can scarcely be expected to pass on the medicament to the deeper tissues with any great energy. When I prescribe an inhalation I always try to get the patient to inhale for three hours daily, and if I fail to get a promise of one hour at least I drop it altogether for some other method of treatment. During inhalation respiration is deeper than with ordinary breathing. It should, therefore, always be done in pure air. I always endeavor that it shall be used out of doors. There are occasions

*I have tried, with the assistance of Messrs. Philip Harris & Co., of this city, to devise some plan for obtaining this constant pressure on a small portable scale suitable for one person. The city water pressure was evidently altogether insufficient for the purpose, and we found it practically very difficult to obtain sufficient pressure by placing weights on the open end of a cylinder which communicated with the fine nozzle. Either the cylinder was so small that its contents were speedily exhausted or else the requisite weight was so great as to be very cumbersome and impossible to be manipulated by the patient. A motor of some sort—a steam engine is used abroad—seems to be the only solution. Still I trust it is not too Utopian to hope that such an apparatus may be placed in each large town where patients could resort, each taking his own nozzle and medicament, to be attached to the central power installation for a small fee per *séance*.

when inhalation is used as a palliative only—*e.g.*, as a sedative to cough before going to bed. Here, manifestly, if you achieve palliation it matters not how short a time the treatment has lasted. But when more far-reaching curative effects are desired then the longer periods are necessary.

I do not suppose any one of us questions the efficacy of treatment by inhalation when we have to do with nose, pharynx, larynx, or main bronchi, but many are sceptical as to its influence on diseased conditions of the alveoli or fine bronchioles. I think this scepticism is largely the result of our want of thoroughness in carrying out the treatment. When I have succeeded in getting it done for three hours daily for two or three weeks the improvement is usually so marked that there is no difficulty in persuading the patient to continue for two or three months. If the inhalation be a gaseous one—*e.g.*, H_2S—I do not see how we can avoid the conclusion that diffusion will carry it right into the alveoli and that it will be there taken up into the blood along with the oxygen. But when the inhalation consists of an atomized liquid I admit the result is more doubtful. It will largely depend upon the fineness of the atomization and upon the weight and volatility of the drugs used. In any case a large proportion must necessarily be deposited in the upper air passages. It would be unwise to use drugs which are not largely volatile at the temperature of the lungs; hence we find the volatile oils are favorite drugs for inhalation—*e.g.*, the terpenes, eucalyptus, balsams of Peru and tolu, oil of cade, and betul. But we must remember that the tidal air is only one-thirteenth of the total air in the lungs; one-half of this comes back again more or less unchanged; hence the inhalation when it reaches the alveoli can only be one twenty-fifth as strong as when it enters the mouth. When we consider the amount which has been deposited on the way we shall probably be right in saying that the percentage of active medicament which enters the alveoli cannot be more than one-fiftieth of that which enters the mouth. I am not saying this to discourage inhalation, for I believe it has a future; but there is no surer way of damning a therapeutic method than by expecting from it more than it can possibly give. On the other hand, when we call to mind the immense difference a comparatively minute change in the ordinary air makes in our health we cannot help believing that inhalation, properly employed, is a powerful therapeutic measure. But its power resides not in the percentage strength of the inhalation but in the vast quantity of it inhaled; that is, in the long duration of its employment.*—*The Lancet*, London.

* The amount of air inhaled daily by an average man is no less than 10,000 litres. If we take the absolute amount of water vapor in the air we find that a considerable change in this, which acts as a diluent to the gasses of the air, can make a considerable difference to the intake of oxygen—e.g., at Madras a man inhales 80·7 kilogrammes of oxygen a month; at London or Brussels 87·3; and at St. Petersburg as much as 90·4 kilogrammes—i.e., one-eighth more oxygen at St. Petersburg than at Madras; or, *anglicé*, in a year he would inhale 270 pounds more oxygen at St. Petersburg than at Madras.

A CLINICAL STUDY OF THE USE OF ANTITOXINE SERUM (DUNBAR'S) IN HAY FEVER DURING THE SEASON OF 1903. A NEW AND DISTINCT ADVANCE IN ITS MANAGEMENT.*

BY ALEXANDER W. M'COY, M.D., PHILADELPHIA, PA.

THROUGH the courtesy of Dr. Emil Meyer, of New York, I had the opportunity of testing in my private practice the antitoxine serum of Dunbar in cases of hay fever. I have no experience with the earlier attacks of the disease known as "blossom cold," "rose cold," etc. My observations extend over July, August and September, and were confined to *periodic* attacks *only*—rhinitis vasomotoria periodica.

I had not gone far in my study before I was impressed by the great latitude in public opinion as to what was to be called hay fever. Many cases coming under observation as hay fever were in no sense periodic in the summer months only, and not a few were composite or mixed cases, such as nasal polypi, nasal asthma, and chronic vasomotor rhinitis. I have limited my observations to such cases as could show summer periodicity, with a clear history of previous similar attacks, after these were reinforced by the history of heredity from one parent of similar attacks, and, chiefly, by finding all the clinical evidences in each case present upon *examination*, viz., itching of nasal membrane, sneezing, itching of the conjunctival membrane and of the palate and fauces, spasmodic cough and asthma, as well as the intense nervousness and general lassitude often accompanying the attacks. Examination of the nasal cavities in the several cases showed the typical features present, such as a pale gray, boggy and leaking membrane, and the nasal cavities were often filled with watery seepage. Eliminating all but purely periodical autumnal attacks, which were always examined and the history taken, I began the treatment by the local application of the serum to the eyes and nasal mucous membrane by means of a pipette. To the conjunctival mucous membrane one or two drops were instilled from two to four times a day. For the nasal passages, from two to four drops were dropped in each nostril from two to six times a day. Fifteen cases were treated, all typical cases of periodic hay fever. One or two typical cases are reported as follows:

CASE 1.—Patrick ———. Has had hay fever for eight years, coming on in early August. Has not missed a season for eight years. The patient has been under my care for six years, and has been treated each year according to the latest and best remedies, with but little relief. Owing to my absence from home during August the patient did not come under treatment until September

* Read before the Section of Otology and Laryngology of the College of Physicians.

2nd. I found him suffering from a pronounced attack. After two days' treatment he had some relief from symptoms. The relief continued and increased, and at the end of one week all symptoms had abated and he had complete freedom from sneezing, itching and watery discharge, and had no asthma—which in previous years had been especially bad on or about September 10th. In previous seasons the asthmatic seizures had been severe, and had lasted all through September and part of October. This case has been under daily observation and has continued—and now remains—free, absolutely free, from every symptom. This patient used eight bottles of serum—about a bottle a day; much more than any patient under my care.

Case 2.—Mrs. W. H. S., has had hay fever for twenty years. During the present season she had immunity from an attack of hay fever until September 3rd. She attributed the immunity to massage of the face and nose instituted before the time of her attack. On September 3rd, without warning, all the symptoms of an attack of hay fever appeared. The serum treatment was begun the following day. In two days from beginning the serum treatment all symptoms had ceased, and she has remained perfectly well since up to present writing.

Case 3.—H. S., aged 18 years, has been subject to attacks of hay fever for many years. The attacks have been so severe that he has found it necessary to select an immune locality in which to spend the summer. This year he returned home on September 8th, and had symptoms of hay fever immediately. Antitoxine serum was begun the following day; the serum relieved the itching of the eyes and sneezing, and mitigated the nasal distress. On October 7th he reports having been entirely free from attack, although some of his friends still have them. He has used four bottles of serum.

The above reports are sufficient to illustrate the effect of the serum treatment. In the fifteen cases in which I made my clinical experiments, the effect was so promptly manifested, the relief so complete, and the result so permanent for this season, that it appears really marvellous! We have all heretofore experienced such deep disappointment in our trials of various methods of cure—surgical and medicinal—that the writer was, to say the least, not enthusiastic concerning results, but he can truthfully say that he believes no such advances have ever yet been made in the treatment of hay fever. It remains to be determined whether there are in America some cases of hay fever not amenable to cure by the use of the antitoxine serum of Dunbar. So far as my fifteen cases can illustrate, they appear to confirm the contention of Professor Dunbar, that cases of hay fever are dependent upon the toxine resident in the various pollens of *grasses*. It is interesting and noteworthy that the experiments of Professor Dunbar open up a new field, this being, so far as I am aware, the first instance of the production of an antitoxine serum or fluid where the animal product has been crossed with a vegetable product.

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

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Editorials.

NOTIFICATION OF TUBERCULOSIS IN ONTARIO.

A FEW years ago the Town Council of Sheffield, England, applied to Parliament and obtained a private Act, making the notification of consumption compulsory throughout the town for a trial period of five years. The trial has been justified and has proved successful in Sheffield.

In New York and Philadelphia such notification is now re-

quired, not with the idea of quarantining the cases, but in order to keep informed as to their location, and to make it possible to direct approved preventive measures against the spread of tuberculosis from the sick to the well.

The investigations of Anders and Flick, of Philadelphia, and those of Biggs, of New York, show that tuberculosis is not uniformly diffused through a community, not even in those localities where it occurs most frequently; but is confined largely within narrow boundaries, as in certain streets, and within the walls of certain houses. These investigations have shown that, when a house is once infected with tuberculosis, repeated cases are developed in it among the new tenants occupying such a house. These infected houses are most frequently found in the narrower streets, in courts and in alleys. Though there is some danger of infection from the inhalation of dust in the open air in the crowded parts of a city, it seems probable that a more prolonged exposure to a concentrated atmosphere of infection, as found in infected houses, is the most frequent mode of contracting the disease. The dust in street cars and various public places is often infected, and may occasion the contraction of this disease, so that the prohibition of spitting on the floors of cars, ferry boats and other public conveyances should be strictly enforced, as a wise sanitary measure.

Statistics compiled by the Provincial Board of Health show that in the ten years from 1896 to 1906 there were 36,700 deaths from tuberculosis in Ontario, 11 per cent. of the total mortality. The records of deaths from tuberculosis in Ontario are: In 1897, 3,164; 1898, 3,291; 1899, 3,405; 1900, 3,484; 1901, 3,284; 1902, 2,694; 1903, 2,723; 1904, 2,877; 1905, 2,666; 1906, 2,911. These figures, based on a conservative estimate of four cases to each death, would show that there are about 12,000 cases of tuberculosis in various stages continually present in this Province.

What a reflection on our boasted knowledge of disease and our civilization! If tuberculosis is preventable, why not try to prevent it? Much alarm is exhibited at the proximity of smallpox, a preventable disease, a voluntary disease in truth, which one need not have if one is properly vaccinated.

There is no reliable vaccination against the infection of tuberculosis, and the best preventives are to keep oneself in good trim by avoiding bad air, bad whiskey and bad food.

In reference to the large mortality from tuberculosis in Ontario there is much public indifference, many persons considering it a weeding-out process for the removal of degenerates and weaklings. As long as the taking-off process does not become sensational the large mortality from tuberculosis is accepted tranquilly. And yet, after all, death is death, and if the cause of death from a disease is a preventable one, efforts should be made to prevent it. If in 1906 some 2,911 deaths had been traced to foul water, to dirty milk, to impure foods, there would have been much ado about it.

Whether they are situated in populous city or thinly populated village, premises occupied by consumptives should be known to the local health authorities. Consumptives should be taught simple measures to prevent the infection of their friends and neighbors. The premises should be thoroughly renovated after the removal or death of a consumptive. J. J. C.

FLORENCE NIGHTINGALE.

Glancing at the head line in a newspaper a few days ago, we read, "Honor for Miss Nightingale."

How that wonderful woman's name almost seemed like a half-forgotten song; how it recalls the school days and the old verse in the "Reader":—

> "A lady with a lamp shall stand
> In the great history of the land."

Yet, all worthy and beautiful her life and deeds of ministering when the old world was tossed on a sea of blood and tears, the nation somehow forgot to thrust much public honor upon her. Of course the late Queen Victoria recognized her worth fittingly. It was at the instance of Queen Alexandra that Miss Florence Nightingale was decorated last year with the English Order of Merit, the statutes of which had to be modified by King Edward in order to admit of her being rewarded by this highly prized appointment, and the part which the Queen played in the affair was emphasized by the fact that her own birthday was selected as the most suitable date for the bestowal of the honor. On March the 16th of this year "the freedom of the City of London" was conferred upon her.

The ceremony took place in the Guild Hall in the presence of a large gathering of physicians and nurses. But almost too late, for it is near to the sunset hour of Florence Nightingale's life—eighty-eight years. She was too weary to attend the ceremony, and so was represented by her nephew. No wonder the Chamberlain of the City of London, Sir Joseph Dimsdale, regretted that, by the unexplained omission of a former generation, Miss Nightingale had not been honored in this way half a century ago. We cull a couple of paragraphs of interesting detail of this good woman's early surroundings from "The World":—

"It is not generally known that Miss Nightingale was known in her girlhood by a different name. Originally her patronymic was Shore, which she bore until after she had attained womanhood. Her father was William Shore, and it was only on inheriting the estate of Lea Hurst, that beautiful place in Derbyshire, from his uncle, Peter Nightingale, that he, in accordance with his relative's will, assumed the name and the armorial bearings of the testator. He came of an old family, which for generations had owned the leading banking house in Sheffield, which has been possessed of land in the Counties of Derby and York since the fifteenth century, and which exists to-day in the person of Harrington Shore of Norton Hall and Lindridge House, Leicestershire. Her father was a very wealthy and very cultured man, who mingled much in the literary and fashionable society of the day, and was a great traveller.

"It was in Italy that his two children were born. One of his daughters—that is to say, the one now decorated with the Order or Merit—received the name of Florence, from the city of her birth. The other daughter, born at Naples, received the extraordinary name of Parthenope and married the late Sir Henry Verney of Claydon, which is now in the possession of his son, Sir Edmund Verney.

"Miss Nightingale is the only woman to have received the Order of Merit."

Honors, come they early or late, mean little to one whose life is so full, whose sympathy so deep, whose devotion to service so profound, and whose outlook is as broad as life's sorrows, and as high as the gate of Heaven. W. A. Y.

SOME REFLECTIONS ON THE TUBERCULOSIS CONFERENCE HELD AT TORONTO.

A TUBERCULOSIS conference was held at the Alexandra Theatre on the afternoon of March 4th last. The chair was taken by His Excellency the Governor-General of Canada, with His Honor, Sir Mortimer Clark, seated at his right. Among those on the platform were Hon. W. A. Charlton, Mr. W. J. Gage, Hon. W. J. Hanna, Mr. Edward Gurney, Mr. Ambrose Kent, Mr. J. P. Downey, M.P.P., Mr. and Mrs. P. D. Crerar, Hamilton; Mayor Stavely, London; Mayor D'Arcy Scott, Ottawa; Judge Barron, Stratford; Mr. J. W. Bowlby, Brantford; Dr. N. A. Powell, Mr. Lloyd Wood, and Mr. Thomas Long.

His Excellency reprimanded the Canadians for their antipathy to cold air in their bedrooms in winter. He said: "I never pass through a city in Canada in the early morning, after leaving a railway station during the winter, without counting the number of open windows that I see, and I pass through street after street apparently without a cranny or a crack through which the fresh air from outside can penetrate into the house, and I reflect upon the way in which the poor people, out of sheer ignorance, are manufacturing consumption by preventing the blessed air of heaven from coming in and saving them from becoming victims of that plague."

A resolution to the Provincial Government, asking that the grant towards the maintenance of consumptive patients in sanatoria be raised from $1.50 to $5 a week per patient, was moved by Hon. W. A. Charlton, and seconded by Mayor Stavely, London. The resolution was carried without a dissenting voice, although a delegate from Western Ontario expressed the opinion that the Provincial Government should be asked to shoulder the whole expense.

Hon. W. J. Hanna, Provincial Secretary, said that the Government was favorably disposed to give increased financial assistance to sanatoria; but he did not state how far it would be prepared to go. He said, further, that the Government proposed issuing a pamphlet dealing with the whole subject of tuberculosis. This pamphlet could be placed in the hands of every adult in the Pro-

vince, and would leave no excuse for ignorance on the subject, such as at present exists.

His Excellency's remark should be a stimulus to improvements in the ventilation of public and private buildings. During the last decade the ventilation and heating of many churches, halls and theatres in Toronto have been perfected. Many modern dwellings here are also well ventilated artificially; but in the great majority of dwellings in this city an open window is the only route by which fresh air can be introduced, particularly at night, when the occupants are asleep.

A grant of $5.00 a week for each patient, instead of $1.50, would be a popular step. In keeping a sanatorium for consumptives the chief expense is incurred in paying for food supplies. If the Provincial Government will feed the consumptives, the Ontario municipalities ought to house them. In thus dividing the expense of this necessary undertaking the Provincial Government would handle the big end of the stick; for a modern sanatorium is to be an inexpensive structure, which, as Dr. Osler quaintly says, might be burned down every four or five years with advantage. Keeping this last suggestion in mind, and realizing the necessity of making natural ventilation the characteristic feature in a sanatorium for consumptives, an architect should be able to design a country sanatorium without running up a very large bill. J. J. C.

THE PROPOSED AMALGAMATION OF GRACE AND THE WESTERN HOSPITAL.

The first formal meeting of the Boards of Grace and the Western Hospitals was held two weeks ago, when a preliminary chat took place as to what, up till then, had been but a matter of newspaper gossip, viz., a scheme to amalgamate the two institutions. It was proposed that Grace Hospital sell its buildings and site on the corner of Huron and College Streets, and with the money and a grant of about $200,000 from the City of Toronto, put up a splendid modern building on the spacious grounds of the Western Hospital on Bathurst Street. Nothing definite was done at that meeting, but we trust that the idea will not be dropped. It seems to us that the scheme of amalgamation is a good one, as both

institutions are overcrowded with patients, lacking in accommodation and cramped financially. The Western Hospital has the site for a magnificent institution, and is situated in a part of the city needing large accommodation for the sick. Why not throw the two interests in one and make a hospital worthy of the west end section of our beautiful city? W. A. Y.

EMETICS AS AIDS IN THE PROMOTION OF TEMPERANCE.

Emetics are employed medicinally for a variety of purposes. The removal of an irritant poison, such as arsenic, is facilitated by giving the patient plenty of lukewarm water, or the stomach may be washed out with the stomach pump. In a case of opium poisoning there may be difficulty in exciting vomiting, owing to partial paralysis of the vomiting centre, and a local emetic, such as sulphate of zinc is used with advantage. While the stomach pump is more effective in washing out the stomach, the operation of an emetic helps to rouse a narcotized patient from his heavy sleep. Besides, a stomach pump is often not at hand when it is most wanted. In disorders of the respiratory tract, as in bronchitis, when a quantity of mucus accumulates in the bronchial tubes, an emetic is used with advantage, instead of keeping up a prolonged nausea, by the use of an expectorant. An emetic is also useful to remove false membrane in croup and diphtheria.

These are probably the chief medicinal uses of emetics; but there are other uses. For instance, gourmands use emetics to remove a quantity of expensive food which they are unable to digest. Emetics are not usually advised as means to enhance the powerful effects of oratory; but something may be said on that score. A husky or nasal-toned voice distresses the listener's ear, and the best-turned periods cease to charm when the speaker begins to cough. In ante-bellum days, a famous Kentucky lawyer, on the morning of the day when he addressed a jury in an important case, used to take an emetic, experience having taught him that a clear head made his arguments cogent, while a clear voice enhanced the effect of his impassioned appeals.

In Ontario emetics are rarely dispensed. A druggist of nine years' experience in Toronto tells us that he does not recall a

single instance in which he had been asked for an emetic by a customer. Other druggists here have made somewhat similar remarks.

It is quite the other way at St. John, New Brunswick, as we learn from a paper read by Dr. Geo. G. Corbet before the St. John Medical Society (*vide Maritime Medical News*, December, 1907, p. 465).

Dr. Corbet says: "I am surprised at the indiscriminate use of emetic powders and the size of the dose, which the druggists dispense without a physician's prescription, the said powders being a poisonous dose. It seems that tartar emetic is sold in this city without even a poison label being affixed, and in doses that exceed those allowed by the British Pharmacopœia. These powders are supplied to anyone asking for them, without the druggists even taking the precaution to find out that the person using them understands the nature of the drug they are supplying."

Curious to learn the reason of the predilection of the people of St. John for tartar emetic, we wrote to Dr. Corbet, St. John, about it, and learn from his reply (*vide* p. 244) that the emetic powders are used to relieve people who have been drinking too freely. The full dose of tartar emetic, as an emetic, being from one to two grains, four grains given at one dose would be poisonous. It should only be dispensed on prescription and in proper doses. J. J. C.

WHY CONDEMN THE NINETY AND NINE?

As the matter for our April issue has just been sent in to the printers, we can only add this note.

The citizens of Toronto have been astounded by reading recently in the daily press of the grave charges of illegal practice brought against several Toronto physicians. As the cases at this date are still *sub judice*, it is not as yet within our province to discuss them.

Not for one moment would we condone this condition of affairs in professional circles, as it is beneath contempt, but, as men, we believe in British justice, and think that everyone should be considered innocent until he is proven guilty. We extremely regret that there should be even the suspicion of ground for such serious charges being laid at the door of any members of our honorable profession. That the reverend gentleman who edits the *Toronto*

Globe should have treated the subject as he did in his issue of March 18th, as if the whole profession were on trial, is simply contemptible, and we think that a special meeting of the Academy of Medicine should be called to discuss the editorial. If not, then let the Toronto representatives of the Ontario College of Physicians and Surgeons be the standard-bearers in a matter which so seriously reflects upon the ethical dignity of our medical men as a body.

When grave charges are (fortunately infrequently) brought against a clergyman, he is judged and spoken of as an individual and a sinner, the other ninety and nine are left to bleat and nibble away secure within the sheep fold, and the reverend editor's pen is left sticking in the property potato on his desk.

Then why this attack on the doctors of the Province? Fortunately the age of witchcraft is past; but it would be, indeed, an evil day did the honor and reputation of the profession of this country depend upon the statements of harlots.

"For, as God lives, I'd not condemn
An Indian dog, on word of them."

March 19th, 1908. W. A. Y.

EDITORIAL NOTES.

Vital Statistics of Ontario for 1905.—The Annual Report of the Registrar-General of Ontario for 1905 shows that there were in this Province in that year 51,911 births, 20,426 marriages, and 31,369 deaths—the estimated population being 2,208,364. A recapitulation, by classes, of diseases causing the deaths, by counties, in 1905, including cities and towns, gives the following results:

	Deaths.
1. Communicable, epidemic diseases	1,457
2. Other general diseases	4,812
3. Diseases of nervous system and organs of sense	3,504
4. Diseases of circulatory system	2,084
5. Diseases of respiratory system	3,215
6. Diseases of digestive system	3,193
7. Diseases of genito-urinary system	1,145
8. Puerperal diseases	211
9. Diseases of skin and adnexa	76
10. Diseases of locomotor system	36
11. Malformations, diseases of infancy and old age	8,988
12. Suicides	109
13. Accidents	1,339
14. Ill-defined causes	1,200
Total deaths	31,369

Canadian Legislation Regarding Denatured Alcohol.—In the February (1907) number of CANADIAN JOURNAL OF MEDICINE AND SURGERY we commented on a paper read at the Toronto meeting of the British Medical Association by Casey A. Wood, M.D., Professor of Clinical Ophthalmology, University of Illinois. The author of the paper made a plea in favor of prohibiting, or rendering unprofitable, the manufacture or sale of wood spirit in Canada. This procedure had been accomplished in the United States by the adoption of a "denatured" alcohol bill. Canada, we learn, is about to adopt the suggestion of the author of the paper and join the United States in using cheap, untaxed, denatured grain spirit for light, fuel, solvent and power-producing purposes. In the House of Commons, Ottawa, February 26, 1908, the Hon. W. Templeman, in reply to a motion by Mr. Bole, respecting the industrial use of alcohol, objected to a duty-free alcohol for medicinal and pharmaceutical preparations, because, after the articles had been manufactured and sent out, the alcohol in them could, by redistillation, or some chemical process, be made drinkable. No country permitted the employment of other than duty-paid alcohol in the manufacture of pharmaceutical preparations. He did not think that the druggists of Canada should have access to alcohol duty-free for manufacturing purposes. The policy of his department was to aid and encourage the use of alcohol in the manufacture of products from which it could not be again taken and used for potable purposes. Hon. Mr. Templeman thought it would be possible to put on the market, in the course of a few months, denatured alcohol in the neighborhood of 50 cents a gallon. This is a matter of some importance because cheap denatured grain spirit may with safety be used for light, fuel, varnish-making and other industrial purposes instead of that dangerous product, wood spirit. Owing to the fact that in several cases loss of life has occurred, and that in other cases total blindness has resulted from the use of wood spirit, it is for the benefit of the public health in Canada that denatured grain alcohol is to be employed for industrial purposes instead of wood spirit.

Insanity Prevented by Curing Neurasthenia.—From universal experience, it is of the first importance that a neurasthenic patient should not cross the border line and stray into insanity. Dr. Campbell Meyers, neurologist, in charge of the nervous wards of the Toronto General Hospital, claims that treatment of neuras-

thenic patients in these wards has prevented insanity (*vide* First Annual Report of the Nervous Wards for the sixteen months ending September 30th, 1907, reprinted from the Annual Report of the Hospital). From this report we learn that one hundred patients were admitted to the nervous wards from May, 1906, to September 30th, 1907. The wards contain twelve beds, eight of which are in two wards. Each of the four remaining beds is in a separate ward. Of the total number of patients 24 were admitted for observation, 76 for treatment. Of the 24 observation cases, 16 were found to be insane; 3 refused to obey directions and were discharged; 2 were cases of brain tumor; 1 of cerebral syphilis; 2 still remain under treatment. Of the 76 cases of functional neurosis under treatment, 64 suffered from neurasthenia, 2 from hysteria, 2 from catalepsy, 1 from epilepsy, 7 remain under treatment. Of the 69 cases whose treatment has terminated, 26 recovered, 35 were improved, 8 were unimproved. Three relapses have occurred among the 26 classed as recovered. Of those classed as only improved, 9 reported later as quite well. Of the 8 unimproved by treatment 3 died after leaving the hospital, 4 recovered, and 1 became insane. Dr. Meyers attaches great importance to the fact that of the 69 patients treated 50 were suffering from psychasthenia, an intensification of which would have resulted in an attack of insanity. The results of treatment in these 50 cases were: Recovered, 19, or 38 per cent.; improved, 24, or 48 per cent.; unimproved, 7, or 14 per cent. Hence, of these 50 cases which were threatened with insanity, 43, or 86 per cent., recovered or were improved by treatment. These results would justify the use of the nervous wards of the hospital as a means of preventing insanity in cases of neurasthenia.

Protection Against Fires in Public Schools.—As the warm air furnace is situated in the basement of a schoolhouse, a fire originating from an overheated smoke-stack, a defective smoke-stack collar, or an uncleaned smoke-flue speedily ascends to the ground floor, and may, according to the location of the furnace, bar egress at the front or back door of the building. Uncovered fire escapes should be attached to schools of more than one story. A municipality should be obliged, under penalty, to inspect the heating and ventilating apparatus of public schools, which are supported out of the municipal taxes. The safe condition of the heating apparatus in a school should be certified to by compe-

tent examiners (local Board of Health). When soft coal is burned in a school furnace, the smoke-flues should be examined several times during the winter. On no account should a janitor leave the school building during school hours; he should be a sentinel, to notice and report an outbreak of fire in the school. Of course, in schools provided with spacious stairways, hallways and exits, the doors of which open outwards, escape, in case of fire, is easier than in school buildings with narrow stairways, hallways and exits, in which the doors open inwards; but there is no sufficient reason why fire should ever break out inside a school; and, should a fire break out, it means that some responsible person has blundered. A portable fire extinguisher should be on hand in every school. It should be regularly discharged, and charged again with chemicals, whether a fire occurs or not. In places not provided with a municipal water supply, water should be collected from the roof of the school, stored in a tank, at a proper elevation, and discharged by fire hose at suitable times.

Clean Milk.—All cows should be tested with tuberculin before their milk is used for human consumption, either as raw milk, or in the form of cream, butter, or possibly cheese. It is well, also, that a veterinary surgeon should examine every herd of cows twice a year. Even under favorable conditions as regards the ventilation and cleaning of stables, the feeding and care of the cattle, dairy cows are more subject to tuberculosis than cattle which feed on the ranges. The confined cow suffers from tuberculosis just as the confined man is subject to tuberculosis, because the power of resistance to disease is lowered. A despatch to the *Globe*, March 12, 1908, stated that "70 per cent. of the dairy cows in Winnipeg are affected with tuberculosis. No inspection of these cows by a veterinarian has been made in ten years. So diseased are the cattle that abattoir firms have refused to buy dairy cattle for slaughtering purposes." Just how commonly tuberculosis in the cow becomes a source of the disease in man through drinking the milk of tuberculous cows, it is impossible to say. Cases of tuberculosis in human beings have undoubtedly arisen from this source. The Doctors Mayo, of Rochester, Minn., have recently shown the large proportion of tuberculosis of the abdominal organs among their patients who come from the agricultural regions. The inference which they draw is that the source of the infection in these people must be

from the milk, since they are milk-users and germs of tuberculosis entering the lungs in the air would cause tuberculosis of the lungs, or consumption. According to the observations of Dr. Calmette, Lille, tuberculosis in man starts frequently in the digestive tract, even when the disease is situated in the lungs and other parts of the body. If the people of Canada take hold of the tuberculosis question in earnest, they should insist on milk free from tuberculosis on their tables, with at least as much earnestness as they demand fresh air in their homes. No cow should be placed in a herd until it has been tested and found free from tuberculosis. Such testing should be repeated once a year. One tuberculous cow may infect a whole herd. J. J. C.

PERSONALS.

Dr. Milton Cotton has removed from Simcoe Street to 210 Bloor Street West.

Dr. E. A. McCulloch, partner of Dr. N. A. Powell, is considerably better. The doctor spent a couple of weeks at his old home in Omemee last month.

We are sorry to announce that Dr. J. W. Peaker, of Bathurst Street, is not recovering from his recent prolonged illness, but is, we fear, losing ground. The doctor is suffering from cardiac trouble, a sequela to rheumatic inflammation.

S. J. Meltzer, M.D., LL.D., head of the Department of Physiology and Pharmacology of the Rockefeller Institute for Medical Research, New York, will deliver a lecture on "Nature of Shock" the first Tuesday in April before the Academy of Medicine, Queen's Park.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

J. J. Cassidy, Esq., M.D., Editor Canadian Journal of Medicine and Surgery:

Dear Doctor,—Your letter received and noted. When writing my paper, "Liberty," I had one object in view, and that a local one. My object was to break up cliques which govern our hospital and our public affairs. Being local in origin, that part of my paper will not interest you, unless you have the same to contend with in Toronto.

I want our young men to be men, and not toadies to the mighty ones. I want to improve medical St. John, so that we can take our proper place in the medical world. (I am one of the younger men —McGill, 1898.) I claim rightly when I say that the rank and file of our medical brethren here are O. K. No city can produce a better lot.

My first attention was drawn to the indiscriminate use of tartar emetic, grs. iv., when I was called to a supposed case of (H_9Cl_2 solution) poisoning. The druggist informed me that he administered 4 grains to the patient, i.e., he sent it to the patient, who took it. In making inquiries I was informed that it was an everyday occurrence, when anyone asked for an emetic powder, to dispense grs. iv. tartar emetic and ask no questions, or even ask for a prescription. Any child can get said powder. The following is the usual method: A child or adult goes to a druggist and asks for emetic powder (for someone who has been drinking). The druggist will dispense tartar emetic without suggesting anything else. One of our leading druggists told me it was done in all drug stores he had worked in (three of them) before starting for himself, and it was he who suggested to me to incorporate that part in my paper, as he very strongly objected to it. The sale of paregoric is almost universal.

I have been in a drug store when emetic powder was sent to a party, and upon asking the druggist what quantity he sent, he said 4 grains tartar emetic.

If you need any further information on said subject, tabulate any questions and I will be pleased to answer fully.

Would you kindly get me, or if you have in your possession, information regarding the hospitals in Toronto or Ontario. What hospitals have the open door, i.e., allow the patient's own physician to attend them, they occupying private or semi-private rooms? I would like official information, as I will shortly need it.

I am, yours fraternally,

176 Waterloo St., St. John, N.B., Feb. 29, '08.

Geo. G. Corbet.

News of the Month.

PRIZE LIST OF THE INTERNATIONAL CONGRESS OF TUBERCULOSIS.

The Central Committee of the International Congress on Tuberculosis has announced the offer of the following prizes:

1. A prize of $1,000 is offered for the best evidence of effective work in the prevention or relief of tuberculosis by any voluntary association since the last International Congress in 1905. In addition to the prize of $1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

Evidence is to include all forms of printed matter, educational leaflets, etc.; report showing increase of membership, organization, classes reached—such as labor unions, schools, churches, etc.; lectures given; influence in stimulating local Boards of Health, schools, dispensaries, hospitals for the care of tuberculosis; newspaper clippings of meetings held; methods of raising money; method of keeping accounts.

Each competitor must present a brief or report in printed form. No formal announcement of intention to compete is required.

2. A prize of $1,000 is offered for the best exhibit of an existing sanatorium for the treatment of curable cases of tuberculosis among the working classes. In addition to the prize of $1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

3. A prize of $1,000 is offered for the best exhibit of a furnished house, for a family or group of families of the working class, designed in the interest of the crusade against tuberculosis. In addition to the prize of $1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award. This prize is designated to stimulate efforts towards securing a maximum of sunlight, ventilation, proper heating, and general sanitary arrangement for an inexpensive home. A model of house and furnishing is required. Each competitor must present a brief with drawings, specifications,

estimates, etc., with an explanation of points of special excellence. Entry made be made under competitor's own name.

4. A prize of $1,000 is offered for the best exhibit of a dispensary or kindred institution for the treatment of the tuberculous poor. In addition to the prize of $1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

5. A prize of $1,000 is offered for the best exhibit of a hospital for the treatment of advanced pulmonary tuberculosis. In addition to the prize of $1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management and results obtained. Each competitor must present a brief or report in printed form.

6. The Hodgkins Fund Prize of $1,500 is offered by the Smithsonian Institution for the best treatise that may be submitted on "The Relation of Atmospheric Air to Tuberculosis."

The detailed definition of this prize may be obtained from the Secretary-General of the International Congress, or Secretary of the Smithsonian Institution, Chas. D. Walcott.

7. Prizes for educational leaflets:

A prize of $100 is offered for the best educational leaflet submitted in each of the seven classes defined below. In addition to the prize of $100, a gold medal and two silver medals will be awarded in each class. Each prize and medal will be accompanied by a diploma or certificate of award.

Competitors must be entered under assumed names.

(*a*) For adults generally (not to exceed 1,000 words).

(*b*) For teachers (not to exceed 2,000 words).

(*c*) For mothers (not to exceed 1,000 words).

(*d*) For indoor workers (not to exceed 1,000 words).

(*e*) For dairy farmers (not to exceed 1,000 words).

(*f*) For school children in grammar school grades (not to exceed 500 words).

In classes *a*, *b*, *c*, *d*, *e* and *f*, brevity of statement without sacrifice of clearness will be of weight in awarding. All leaflets entered must be printed in the form they are designed to take.

(g) Pictorial booklet for school children in primary grades and for the nursery.

Class *g* is designed to produce an artistic picture-book for children, extolling the value of fresh air, sunlight,

cleanliness, etc., and showing contrasting conditions. "Slovenly Peter" has been suggested as a possible type. Entry may be made in the form of original designs without printing.

8. A gold medal and two silver medals are offered for the best exhibits sent in by any States of the United States, illustrating effective organization for the restriction of tuberculosis. Each medal will be accompanied by a diploma or certificate of award.

9. A gold medal and two silver medals are offered for the best exhibits sent in by any state or country (the United States excluded), illustrating effective organization for the restriction of tuberculosis. Each medal will be accompanied by a diploma or certificate of award.

10. A gold medal and two silver medals are offered for each of the following exhbits; each medal will be accompanied by a diploma or certificate of award; wherever possible each competitor is required to file a brief or printed report:

(*a*) For the best contribution to the pathological exhibit.

(*b*) For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any State of the United States. Brief required.

(*c*) For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any state or country (the United States excluded). Brief required.

(*d*) For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any municipality in the world. Brief required.

(*e*) For the society engaged in the crusade against tuberculosis, having the largest membership in relation to population. Brief required.

(*f*) For the plans which have been proven best for raising money for the crusade against tuberculosis. Brief required.

(*g*) For the best exhibit of a passenger railway car in the interest of the crusade against tuberculosis. Brief required.

(*h*) For the best plans for employment for arrested cases of tuberculosis. Brief required.

11. Prizes of two gold medals and three silver medals will be awarded for the best exhibit of a workshop or factory in the interest of the crusade against tuberculosis. These medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

The following constitute the Committee on Prizes: Dr. Charles

J. Hatfield, Philadelphia, Chairman; Dr. Thomas G. Ashton, Philadelphia, Secretary; Dr. Edward R. Baldwin, Saranac Lake; Dr. Sherman G. Bonney, Denver; Dr. John L. Dawson, Charleston, S.C.; Dr. H. B. Favill, Chicago; Dr. John B. Hawes, 2nd, Boston; Dr. H. D. Holton, Brattleboro; Dr. E. C. Levy, Richmond, Virginia; Dr. Charles L. Minor, Ashville, N.C.; Dr. Estes Nichols, Augusta, Me.; Dr. M. J. Rosenau, Washington; Dr. J. Madison Taylor, Philadelphia; Dr. William S. Thayer, Baltimore; Dr. Louis M. Warfield, St. Louis.

THE POST GRADUATE MEDICAL SCHOOL OF CHICAGO.

The Post Graduate Medical School of Chicago announces a very attractive course for May and June, up to and after the time of the meeting of the American Medical Association. In conjunction with the other clinical institutions of Chicago, it will also make special arrangements for clinics before or after the meeting for the members of the American Medical Association.

The School is now giving a very attractive three-week course, which should appeal particularly to busy men. This general course includes general surgery, medicine, gynecology, ear, nose and throat, children's diseases, rectal diseases and diseases of the eye, and all operative work of the various hospitals. The fee, a special one, is $25.00.

Arrangements can be made, by the payment of an additional fee, for special courses of short duration in pathology, bacteriology, examination of blood, sputum and urine, refraction, Wright's serum therapy, cystoscopy, operations on the cadaver, physical diagnosis, operations on animals, infant feeding, electro-therapeutics, hydro-therapy, etc.

THE ONTARIO MEDICAL ASSOCIATION.

The attention of the profession is again called to the 28th annual meeting of the Association, which will be convened in the Normal College building, Victoria Avenue South, Hamilton, on the 26th of May next, and continue in session for the two succeeding days.

The provisional programme has been distributed throughout the Province. The prominence given to the scientific side of the meeting—and this will be of exceptional merit—will not be permitted to dwarf its social aspects. At the smoking concert at the Yacht Club, Hamilton Beach, on Tuesday evening, there will be a most entertaining programme presented. On the succeeding Wednesday

at the Royal Hotel the visiting members will be the guests of the medical men of Hamilton at dinner.

Outside members who are fond of golf are asked to take their clubs, as the privileges of the Hamilton Golf Club have been extended to all visitors through the courtesy of the president, Mr. J. J. Morrison, and of his committee. Members who are visiting the meeting are also extended the privileges of the Thistle Club, by courtesy of the president, Mr. T. C. Haslett, and of the president of the Bowling Club, Dr. H. A. Wardell. Bowls will be supplied.

A luncheon at the City Hospital has been arranged following the morning session on Tuesday. Other entertainment is under consideration, and full announcement will be made in the final programme, which will be issued in May.

The Committee on Arrangements hope that visiting members will bring their wives and daughters, who will be happily cared for by the local ladies, and they trust that this may be one of the features of the meeting.

A MODERN SANITARIUM.

THE opening of the Dr. Hutchison Sanitarium, at 218 Simcoe St., Toronto, is an event which should interest all medical men, being an institution devoted exclusively to the treatment of liquor and drug habitues, and dependent entirely upon the medical profession for support.

The building is a modern home, thoroughly equipped for the purpose, and the treatment is ethical and non-secret.

The remedies used contain no alcohol or other sedative drugs, and in this respect are considered an advance on all former methods of treatment. No patient can be considered cured so long as he takes a tonic or drug of any kind. He must not only be freed from the stimulant to which he was addicted, and all substitutes for it, but also from all tonics or other remedies used in his treatment upon which he might place even a mental reliance.

The most important steps are to free the system from toxic matter and to neutralize the remnant of alcohol or drug in the blood; to destroy the appetite or craving, then to build up the patient's physical vigor and tone up his nervous system, so that there may be no demand for stimulation because of weakness or exhaustion.

A thoroughly equipped, well regulated sanitarium is the only place where uniformly satisfactory results can be obtained in the treatment of such cases. With the methods used at this institution patients enjoy at all times the greatest degree of freedom consistent with their welfare. There being no sickness or solitary confinement in connection with the treatment, the patient can always look back with pleasure on the short time spent there.

SMITHSONIAN INSTITUTION—HODGKINS FUND PRIZE.

In October, 1891, Thomas George Hodgkins, Esquire, of Setauket, New York, made a donation to the Smithsonian Institution, the income from a part of which was to be devoted to "the increase and diffusion of more exact knowledge in regard to the nature and properties of atmospheric air in connection with the welfare of man." In furtherance of the donor's wishes, the Smithsonian Institution has from time to time offered prizes, awarded medals, made grants for investigations, and issued publications.

In connection with the approaching International Congress on Tuberculosis, which will be held in Washington, September 21 to October 12, 1908, a prize of $1,500 is offered for the best treatise "On the Relation of Atmospheric Air to Tuberculosis." Memoirs having relation to the cause, spread, prevention, or cure of tuberculosis are included within the general terms of the subject.

Any memoir read before the International Congress on Tuberculosis, or sent to the Smithsonian Institution or to the Secretary-General of the Congress before its close, namely, October 12, 1908, will be considered in the competition.

The memoirs may be written in English, French, German, Spanish, or Italian. They should be submitted either in manuscript or typewritten copy, or if in type, printed as manuscript. If written in German, they should be in Latin script. They will be examined and the prize awarded by a committee appointed by the Secretary of the Smithsonian Institution in conjunction with the officers of the International Congress on Tuberculosis.

Such memoirs must not have been published prior to the Congress. The Smithsonian Institution reserves the right to publish the treatise to which the prize is awarded.

No condition as to the length of the treatises is established, it being expected that the practical results of important investigations will be set forth as convincingly and tersely as the subject will permit.

The right is reserved to award no prize if, in the judgment of the committee, no contribution is offered of sufficient merit to warrant such action.

Memoirs designed for consideration should be addressed to either "The Smithsonian Institution, Washington, District of Columbia, U. S. A.," or to Dr. John S. Fulton, Secretary-General of the International Congress on Tuberculosis, 714 Colorado Building, Washington, District of Columbia, U. S. A." Further information, if desired by persons intending to become competitors, will be furnished on application.

Items of Interest.

"The Night Vigil."—We had the pleasure of receiving from Messrs. Reed & Carnrick, Jersey City, recently a copy of "The Night Vigil." This is a beautiful photogravure that is most acceptable and an ornament to the wall of any physician's office.

An Oversight.—We regret that, owing to a typographical error in our March issue, we forgot to give credit to Toronto *Saturday Night* for the verse that was appended to our editorial entitled "Why So Much Sob Copy?" on pages 174 and 175. We tender our apologies.

The Academy of Medicine, Toronto.—At the regular meeting of the Academy of Medicine, Toronto, held at the New Medical Buildings, Queen's Park, on March 3rd, Dr. Hugh H. Young, of Johns Hopkins Hospital, Baltimore, Md., lectured to a large audience on "Operative Treatment for Various Diseases of the Prostate." The lecture was most instructive and entertaining, delivered, as it was, by one who might be termed a past master in prostatic surgery.

Don't Buy Books Unless You Really Want Them.—A library is something more than a collection of books. An imposing array of sumptuous—and untouched—volumes does not make one. Your books should express your own individuality, says a writer in *The Delineator*. Do not let anyone persuade you to buy a book you know is not your kind of book. Do not be lured into buying a handsome library edition of some author that you do want, if the library edition is heavy and uncomfortable to hold and your own preference is a comfortable pocket edition with flexible covers. And, above all, if you are building up a home library, to which the whole family is to have free access, do not choose bindings of such delicate colors or expensive textures as to destroy all the comfort of reading.

The Physician's Library.

BOOK REVIEWS.

Surgery: Its Principles and Practice. In five volumes. By 66 eminent surgeons. Edited by W. W. KEEN, M.D., LL.D., Hon. F.R.C.S. (Eng. and Edin.), Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume III. Octavo of 1,132 pages, with 562 text-illustrations and 10 colored plates. Philadelphia and London: W. B. Saunders Company. 1908. Per volume: cloth, $7.00 net; half morocco, $8.00 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto, Ont.

The contents of Volume III. are Surgery of the Head, by Harvey Cushing, M.D.; Surgery of the Neck, by E. Wyllys Andrews, M.D.; Diseases of the Thyroid Gland, by Albert Kocher, M.D.; The Nose and its Accessory Sinuses, by Harmon Smith, M.D.; Surgery of the Larynx and Trachea, by George Emerson Brewer, M.D.; Surgery of the Thorax, by George Emerson Brewer, M.D.; Surgery of the Breast, by John M. T. Finney, M.D.; Surgery of the Mouth, Teeth and Jaws, by Edmund Owen, M.B., F.R.C.S.; Surgery of the Tongue, by John Chalmers Da Costa, M.D.; Technic of Abdominal Surgery, by John C. Munro, M.D.; Surgery of the Abdominal Wall, by John C. Munro; Surgery of the Peritoneum and Retroperitoneal Space, by John C. Munro, M.D.; Surgery of the Esophagus, by George Gottstein, M.D.; Surgery of the Stomach, by A. W. Mayo Robson, F.R.C.S.; Surgery of the Liver, the Gall Bladder and the Biliary Ducts, by William J. Mayo, M.D., and Charles H. Mayo, M.D.; Surgery of the Pancreas, by B. G. A. Moynihan, F.R.C.S.; Surgery of the Spleen, by B. G. A. Moynihan, F.R.C.S. The index follows.

A surgeon craving enlightenment about some difficult question of diagnosis or treatment may consult Keen's Surgery with great satisfaction. The probability of gaining fresh knowledge from this work might be naturally surmised by glancing over the names of the contributors, most of whom are well known to readers of medical literature. To get the right idea of the greatness of the work, however, one must read some of the articles themselves. Each one is written by a master, who fortifies his individual teaching by citations from the writings of specialists engaged in similar work. The photographs are very instructive and enable the writer of an

article to shorten his descriptions. Simplicity of style has been aimed at in the work, and in view of the number of writers, its attainment is remarkable. J. J. C.

A Text-Book of Alkaloidal Therapeutics, being a condensed resumé of all available literature on the subject of the active principles added to the personal experience of the authors. By W. I. Waugh, M.D., and W. C. Abbott, M.D., with the collaboration of E. M. Epstein, M.D. Second edition. Chicago: The Clinic Publishing Co. 1907. Canadian agents: W. Lloyd Wood, Limited, Toronto.

"This book is dedicated to those who believe in the smallest possible quantity of the best obtainable means to produce a desired therapeutic result." That dedicatory notice we find on the fly-leaf of this text-book, and it expresses perhaps better than we can put it the firm belief of the authors in alkaloidal therapeutics. The book is a somewhat exhaustive study of alkalometry, and no one can read very much of it without becoming more or less of a convert to the use of active-principle remedies in lieu of the indefinite galenicals. As we have already stated in another review of a book on a similar subject, alkaloidal therapy is unquestionably being adopted by a rapidly increasing number of practitioners, who now find that by it they can look for definite clinical results. We commend this book as worthy of careful study.

The Diagnosis and Treatment of Diseases of Women. By Harry Sturgeon Crossen, M.D., Clinical Professor of Gynecology, Washington University; Gynecologist to Washington University Hospital, and Chief of the Gynecological Clinic; Associate Gynecologist, St. Louis Mullanphy Hospital; Consulting Gynecologist to Bethesda Hospital, St. Louis Female Hospital, and St. Louis City Hospital; formerly Superintendent of the St. Louis Female Hospital; Fellow of the American Association of Obstetricians and Gynecologists; ex-President of St. Louis Obstetrical and Gynecological Society; Member American Medical Association, Missouri State Medical Association, St. Louis Medical Society, etc. With seven hundred illustrations. St. Louis: C. V. Mosby Medical Book and Publishing Co. 1907.

This handsomely gotten-up work of some eight hundred pages is one which will be found of great value to the medical student and the general medical practitioner. While highly scientific, it is yet exceedingly practical. The illustrations are very numerous, mostly photographs, and, being carefully chosen, are highly demonstrative. The first chapter, on gynecological examination methods, is extremely practical. The chapter on treat-

ment is especially valuable to the general practitioner, ordinary methods being given due attention.

Throughout the whole work great stress is laid on practical anatomy and practical treatment. The chapter dealing with the Displacements of the Uterus is especially good, unnecessary padding being avoided. The Medico-Legal Points in Gynecology are dealt with in a special chapter, constituting a very useful departure from the usual gynecological text-book.

A special chapter is also devoted to formulæ, and is carefully devised and classified.

This work can be highly recommended, for it combines the scientific knowledge of the latest works with very practical instruction in examination, diagnosis and treatment. W. J. W.

"First Aid" to the Injured and Sick. An advanced Ambulance Hand-Book. By F. J. Warwick, B.A., M.B. (Cantab.), M.R.C.S., L.S.A.; and A. C. Tunstall, M.D., F.R.C.S., Edinburgh. Fifth edition, revised and enlarged; 30th thousand. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 1908.

The fifth edition of "First Aid" is better and fuller than any preceding one. It includes a chapter on "Transport of Sick and Injured," and a number of new illustrations.

A Short Practice of Gynecology. By Henry Jellett, B.A., M.D., B.Ch., B.A.O. (Dublin University), F.R.C.P.I. Third edition, revised and enlarged. London, Eng.: I. & A. Churchill.

The third edition of this work, making its appearance in a comparatively short time since the publication of the second, is an endorsation of the popularity of the book. Dr. Jellett's writing is always clear, concise, and convincing. His "Practice of Midwifery" is standard, and this work on Gynecology bears comparison very well. If any fault can be found it is that he is not dogmatic enough, giving too much the opinions and operative work of other authorities. His treatment of retroversion of the uterus by means of replacement and keeping in place by glycerine and cotton tampons, which soon become very small, hard balls, offering no support, does not commend itself. He makes no mention of Englemann's dry treatment by means of lamb's wool and antiseptic powder, which is a much more practical procedure and gives better results, owing to the non-absorbent quality of the wool and resiliency thereof. The opening chapters on methods of examination, instruments, etc., are excellent. Plastic surgery is well and clearly written, particularly that on the various fistulæ. As a whole it is a good little work, and we can recommend it to the busy practitioner wishing to make a hasty reference on this subject. It is

beautifully got up, the illustrations are excellent, paper and printing very fine, and reflects credit on the old and always reliable firm.

Diseases of the Lungs. Designed to be a practical presentation of the subject for the use of students and practitioners of medicine. By Robert H. Babcock, A.M., M.D., author of "Diseases of the Heart and Arterial System." London and New York: D. Appleton & Company. 1907.

When those who had never met Dr. Babcock received his work on the diseases of the heart, published five years ago, the general opinion expressed was that only a master of diagnostic and therapeutic art could have given to the world a text-book so thoroughly satisfactory. Those who knew him, and the writer of this review is of the fortunate number, remembering that Dr. Babcock has worked out a splendid success against the handicap of total blindness, rejoiced at every word of praise given to the book and to its author. There comes to us now an opportunity to recognize the deeper obligation under which Robert H. Babcock has placed the profession by the production of a work upon the diseases of the lungs, equal to or surpassing the one to which reference has just been made. For a happy combination of the latest and most accurate work in science with the most practical and helpful suggestion in practice, it has only too few rivals. In practice, we all drop into ruts and routine ways, and we need books like this to start us along new lines of thinking and of working.

The illustrations and the bookmaking generally are up to the Appleton standard, and, saying this, it is needless to say more.

N. A. P.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D. Volume IV. December, 1907. Philadelphia and New York: Lea Brothers & Co.

Volume IV.—the last for 1907—begins with a review of diseases of the digestive tract and such allied organs as the liver and pancreas. This is followed by a short section on diseases of the kidneys. After these considerable space is given to surgery of the extremities, fractures, dislocations, tumors, surgery of the joints, shock, anesthesia, and infections. Bier's method of induced hyperemia is recommended in the treatment of acute and chronic infections that are accessible to its application.

Several interesting topics are discussed in the chapter on genito-urinary diseases. Among the more important of these are hematuria; ulcer, cancer, and tuberculosis of the bladder; various conditions of the prostate and testicles, sterility, and gonorrhea.

The last section contains a review of literature that relates to

practical therapeutics. The writer says that it should not be understood that the use of drugs has depreciated, or that we will ever arrive at a time when drugs will not play a most important part in the treatment of disease. Yet there is, undoubtedly, an increasing tendency to emphasize the importance of hygienic management. Rest, regulation of exercise, ventilation, fresh air, and a suitable dietary are matters of the utmost importance, whether drugs are employed or not.

Important topics in this chapter relate to the value of adrenalin, alcohol, anti-diphtheric serum, and other serums, digitalis, thyroid extract, iron, quinine, fresh air, and exercise. A. E.

Cosmetic Surgery. The correction of featural imperfections. By Charles C. Miller, M.D. Including the description of a variety of operations for improving the appearance of the face. 136 pages; 73 illustrations. Prepaid, $1.50. Published by the Author, 70 State Street, Chicago, Ill.

Instead of "Cosmetic Surgery," it seems to me that a more appropriate title for this little book would be "Chirurgie Cosmetique," for when it comes to delicate, plastic work, one naturally turns to the French, and for description to the French language. It is a subject that has been somewhat neglected, but is none the less important, and Doctor Miller has made out a good case as to why the regular surgeon should give this question some considerable attention, rather than leave such things to the charlatan and quack. The illustrations are somewhat crude, but at the same time demonstrate very well what is in the author's mind.

F. N. G. S.

A Text-Book of Alkaloidal Practice. By Wm. F. Waugh, M.D., and Wallace C. Abbott, M.D. Chicago: The Clinic Publishing Co. 1907. Canadian Agents: W. Lloyd Wood, Ltd., Toronto.

This book deals with the Treatment of Disease by the use of the active principles or the alkaloids of the different drugs, in place of the older method, whereon less reliance can be placed. To Drs. Waugh and Abbott must be given a large part, if not all, of the credit for the introduction and untiring efforts in behalf of alkaloidal therapeutics in America. Their theory, and it is no longer a theory, is winning out with almost marvellous exactitude, and thousands of practitioners have adopted the alkaloidal system of medication with the most satisfactory results.

The book consists of nine parts in all, viz.: Infectious Maladies, Fever and Its Management; Constitutional Diseases; Diseases of the Blood and Ductless Glands; Diseases of the Respiratory System; Diseases of the Circulatory System; Diseases of the Digestive

System; Diseases of the Genito-Urinary System; Diseases of the Nervous System, and Intoxications.

Turning to the treatment of broncho-pneumonia, so prevalent this spring, we find the authors lay stress upon the use in the acute stages of veratrine, gr. 1/134; aconitine, gr. 1/134, and digitalin, gr. 1/67, advising that the veratrine be changed to strychnine arsenate at the first indication of debility. To favor and aid resolution and fluidify the exudate, the authors advise strongly ammonium iodide or strychnine in "desperate" doses.

In acute bronchitis, aconitine amorphous gr. 1/134, atropine gr. 1/500, and morphine gr. 1/67, should be given together, and repeated every ten minutes till physiological effect is produced, viz., dryness of the throat, when doses are to be cut down in frequency, though the effect should be kept up.

The book, though new in theory, is a welcome addition to drug therapy.

W. A. Y.

Minor Surgery. By Edward Milton Foote, A.M., M.D., Instructor in Surgery, College of Physicians and Surgeons, Columbia University; Lecturer on Surgery, New York Polyclinic Medical School; Visiting Surgeon, New York City Hospital; Visiting Surgeon, St. Joseph's Hospital; Consulting Surgeon, Randall's Island Hospitals and Schools; formerly Chief in Surgery at the Vanderbilt Clinic. Illustrated with four hundred engravings from original drawings and photographs. New York and London: D Appleton & Company. Price, $5.00.

Dr. Edward Milton Foote, in his Minor Surgery, presents to the profession a book of the most practical nature. He covers fully and in detail exactly the class of surgical conditions with which general practitioners most frequently come in contact. He describes the treatment of many minor surgical processes which are almost untouched either by books on general surgery or the comprehensive systems of surgery. It will prove valuable to the older members of the profession by bringing some of their old-fashioned ideas up to date, although it is to be regretted that Dr. Foote has not seen fit to include such recently established principles as the treatment of acute inflammatory changes by vaccine injection or by the hyperaemic methods of Bier. It is almost needless to emphasize the infinite value of this work to both the surgeon in charge and the student in attendance at out-patient clinics, for it is from this class of cases that the author has drawn his data.

The book is divided into sections on the anatomical regions of the body, under each of which injuries, inflammations, tumors and deformities are discussed. The arrangement is excellent, and a good table of contents and index enable one to conveniently use it for reference. Original and well-finished photographs are pro-

fusely distributed throughout the book. If space allowed, one might mention numerous articles on particular subjects which are worthy of special attention. One cannot fail, however, to commend the author for including a chapter on the female genito-urinary organs, for which one usually has to refer to works on gynaecology. Other chapters deserving of special mention are those on anus and rectum, on dislocations and fractures of the hand, and on injuries of leg and foot, on bandaging and on surgical dressings.

The medical profession has waited long for just such a book as Dr. Foote has written, and will thank him many times for the admirable way in which he has accomplished his task.

E. S. R.

The Archives of Diagnosis. A Quarterly Journal devoted to the Study and the Progress of Diagnosis and Prognosis. Edited by Heinrich Stern. Published by The Archives of Diagnosis, 250 West 73rd Street, New York. One dollar per year.

The first number of this new quarterly has just come to hand. Its purport is to publish papers which embody results of original work and investigation pertaining to Diagnosis and Prognosis. Some twelve special articles, covering 80 pages, are presented, most of them good, but contributing little that is new. A splendid review is given of the recent literature appearing in current journals, both American and foreign, on the subjects of Diagnosis and Prognosis. These are arranged under appropriate departments—General Method of Examination, Respiratory and Circulatory Organs, Alimentary Tract, Nervous System, Urinary Organs, etc. The publishers state that no advertisement of whatever nature will be received for publication. There is a place for a journal such as this, and we wish it all success. J. H. E.

A Text-Book of Pathology, with an Introductory Section on Post-Mortem Examinations and the Methods of Preserving and Examining Diseased Tissues. By Francis Delafield, M.D., LL.D., Emeritus Professor of the Practice of Medicine, College of Physicians and Surgeons, Columbia University, New York, and T. Mitchell Prudden, M.D., LL.D., Professor of Pathology and Director of the Department of Pathology, College of Physicians and Surgeons, Columbia University, New York. Eighth edition. With 13 full-page plate and 650 illustrations in the text in black and colors. New York: Wm. Wood & Co. 1907.

As one of the leading text-books of Pathology, this book is almost too well known to require much commendation. The book, however, has been largely revised and over one hundred and fifty new illustrations have been added. It is rather a relief to note

that there is less bacteriology than in the former edition. This has become necessary from the very wide field which this book covers. As in former editions of the work, an effort is made to give students and practitioners a proper knowledge of how to make autopsies; the preservation of tisues and their preparation for microscopical examination. Then eames the consideration of infection and immunity, describing, with illustrations, the lesions of the acute infectious diseases and the micro-organisms inciting them. The various phases of degeneration and inflammation, characters of tumors, the lesions of the general diseases, of poisoning, and of violent deaths, and the lesions peculiar to different tissues and organs of the body are all thoroughly and concisely described.

For a thorough knowledge of post-mortem examinations, and on the technique of tissue preparation, this is perhaps the best book that any student or practitioner could obtain. A. J. J.

Blood Stains: Their Detection and the Determination of Their Source. A Manual for the Medical and Legal Professions. By Major W. D. Sutherland, of His Majesty's Indian Medical Service, Doctor of Medicine. Paris, London, Madrid. London: Bailliere, Tindall & Company, 8 Henrietta Street, Covent Garden. 1907. All rights reserved.

Anything new on the subject of detection of blood stains will be at once seized upon by all those interested in medical jurisprudence, and this comparatively small book is practically a compendium of the modern tests by which the detection of blood stains and the determination of their source may be carried out. It is not written solely for medical men, but also for the Bench and the Bar. Much that is written in-it will be quite new to all English readers. The writer has evidently written what he believed to be true. The large number of authors quoted shows the varied sources from which Major Sutherland has obtained his data.

This book is published in the United States by Wm. Wood & Co., New York, N.Y. A. J. J.

A Manual of Pathology. By Guthrie McConnell, M.D., Pathologist to the St. Louis Skin and Cancer Hospital and to St. Luke's Hospital, St. Louis, Missouri. 12mo of 523 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1906. Flexible leather, $2.50 net.

Dr. McConnell discusses the subject with a clearness and precision of style that renders the book of great assistance to both student and busy practitioner. The illustrations selected are both useful and artistic. The author's extensive laboratory experience has given to the work a practical character.

Nisbet's Medical Directory, 1908, in two parts. Part I., Directory of Medical Practitioners. Part II., The Local Directory. London: Jas. Nisbet & Co., Limited, 22 Berners Street W.

This Directory comprises in small bulk an alphabetical list of medical practitioners resident all over the world. We have taken means to ascertain the reliability of the information contained in this book, and we have reason for congratulating the publishers upon the outcome of their labors. The Directory gives the year of qualification of each physician, his diplomas, degrees and distinctions, as also his contributions to medical literature.

Part II. consists of a local directory, and contains the names of places where British medical men are resident in Great Britain, Ireland and abroad. The Directory sells in England at seven shillings and sixpence.

Diagnostics of Diseases of Children. By LeGrand Kerr, M.D., Professor of Diseases of Children at the Brooklyn Post-Graduate Medical School. Octavo of 542 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.00 net; half morocco, $6.50 net.

Dr. Kerr has particularly emphasized the objective symptoms, indicating the importance of their correct interpretation. The constant aim throughout has been to render a correct diagnosis as early in the course of the disease as possible, and for this reason differential diagnosis is presented from the very earliest symptoms. Just sufficient of etiology and pathology has been introduced to assist in arriving at right conclusions; and sequelæ have been considered only to the extent that they may be anticipated and thus early recognized. The physician will find the many original illustrations a source of much information and help in his daily pediatric work.

The Essentials of Cytology. An introduction to the Study of Living Matter, with a chapter on Cytological Methods. By Charles Edward Walker, Assistant Director of the Cancer Research, Liverpool, and Honorary Lecturer in Cytology to the School of Tropical Medicine in the University of Liverpool; formerly Demonstrator of Zoology in the Royal College of Science, London. Preface by Professor C. S. Sherrington, F.R.S. London: Archibald Constable & Company, Limited, 10 Orange Street Leicester Square, W.C., 1907.

Cytology, or the sum of our knowledge of cells, appears in this book as a distinctly specialized study, both in the scope of its observations and in the means of making them. The study of cell growth has always been one that has been of the greatest interest to microscopists, and this book seems to be distinctly in advance

of anything that has gone before it. The preface is written by Professor C. S. Sherrington, F. R. C. S., a gentleman well known to most Canadians on account of his original research, and from the fact of his having on more than one occasion given most interesting lectures in this country. The chapters on Cytological Methods contain practically everything that the up-to-date microscopist could wish for. A number of photographs contained in a pocket in the cover of the book are most interesting. A. J. J.

Manual of Anatomy, Systematic and Practical, Including Embryology. By A. M. Buchanan, M.A., M.D., C.M., F.F.P.S. (Glasgow), Professor of Anatomy in Anderson's College, Glasgow, etc., etc. Vol. II., 363 illustrations. London: Bailliere, Tindall & Cox. 1907.

This work from Professor Buchanan's pen is one of the most recent additions to anatomical literature. It is well gotten up in two handy volumes, clearly printed on good paper.

An Anatomy falls readily into the class of either an atlas, a text-book, or a dissector's guide. The modern writer on gross human anatomy can offer but few new facts—his claim to merit must lie in the arrangement of his subject, the fulness and clarity of presentation, and the effectiveness of his diagrams.

There are many familiar drawings and some original diagrams, many of them colored in a helpful manner. A very useful glossary is appended. With Scottish conservatism, the new nomenclature of the B. M. A. is ignored, which must be regretted. In view of the size of the work, perhaps the section on Osteology and Embryology would have been better omitted, and the book kept strictly as a dissector's manual. As such it would find a field of usefulness, for the descriptions are lucid and terse and presented with a very pleasing continuity. O. T. D.

Syphilis. A Treatise for Practitioners. By Edward L. Keyes, Jr., A.B., M.D., Ph.D., Clinical Professor of Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital; Lecturer on Surgery, Cornell University Medical School; Surgeon to St. Vincent's Hospital. With sixty-nine illustrations in the text and nine plates, seven of which are colored. New York and London: D. Appleton & Co. 1908.

Dr. Keyes gives in this treatise the result of, in all, nearly sixty years' experience in Syphilology, so that, though we have had presented to the profession during the last decade a good deal of literature on this subject, the latest contribution has a value all its own. A record of 2,500 cases of syphilis is one from which a good deal of information can be gleaned, especially when they largely comprise, not clinical cases in a hospital out-patient

department that are dealt with hurriedly, but private patients that have been treated with some degree of care and intelligence. The book consists of sixty chapters, and makes a volume of between five and six hundred pages. The author commences by considering syphilis in relation to public health, going afterwards into the general characteristics, etiology, transmission, inheritance, diagnosis, and treatment. Under the latter head, Dr. Keyes goes fully into the administration of mercury and the mixed treatment. He devotes also several chapters to syphilis of the different organs of the body, skin, mucous membranes, the eye, bones, nervous system, muscles, air passages, liver, and genital organs. In the last two chapters he goes fully into hereditary syphilis in utero and in infancy, relapses, and late lesions. The author has given us a book that is practical, and, what cannot be said of many other volumes, one that is original.

The Battle Creek Sanitarium System: Its History, Organization and Methods. By J. H. Kellogg, M.D., Superintendent. Battle Creek, Mich. 1908.

Any medical man desiring to get an epitome of Battle Creek Sanitarium, an institution that has experienced nothing short of phenomenal growth, and is now undoubtedly the largest sanitarium in the world, should write Dr. J. H. Kellogg for a copy of this brochure. It is not, as many might expect, altogether an advertisement of Battle Creek Sanitarium, but is, on the other hand, a picture of the advances made of recent years in the varied applications of scientific medicine, so successfully carried on in that institution. The brochure is interesting, instructive and worthy of careful perusal.

The Pancreas: Its Surgery and Pathology. By A. W. Mayo Robson, D.Sc. (Leeds), F.R.C.S. (Eng.), of London, and P. J. Cammidge, M.D. (Eng.), D.P.H. (Camb.), of London. Octavo volume of 546 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $5.00 net; half morocco, $6.50 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

This work is certainly the most interesting book upon the pancreas which has appeared for some time. It shows the character of completeness, which is perhaps not common in modern English works, and no matter what side of pancreatic disease interests the reader he will find it not only well discussed, but full references to the literature, so important in a monograph.

The first ten chapters are devoted to a discussion of the Anatomy and Comparative Anatomy, the Embryology, Physiology and Pathology. We note, by the by, that, although the authors very

fully discuss the structure of the Islands of Langerhans and their relationship to carbohydrate metabolism, and are apparently inclined to agree with Opie and others in regard to the significance of the changes in their structures in diabetes, yet they do not commit themselves positively.

A somewhat unsatisfactory part of the work is the discussion of Cammidge's reaction in diseases of the pancreas. It strikes me that the scientific basis for the conclusions is too slight, and that the reactions cannot be of the importance the authors would have us believe. On the whole, however, the book is a valuable addition to the subject of pancreatic disease. It is specially well illustrated.

J. J. M.

Proceedings of the Royal Society of Medicine. Vol. 1. Nos. 2 and 3. December, 1907, and January, 1908. London: Longmans, Green & Co., 39 Paternoster Row. Price, seven shillings and sixpence per volume.

We are privileged in having received the December and January issues of the Proceedings of the Royal Society of Medicine, which we had occasion to refer to in our February number. Each issue seems to be getting better and more elaborate. The two issues consist of an account of the clinical cases shown before the Clinical and Dermatological Sections, and also include the addresses delivered before the Electro-Therapeutical, Epidermicological, Laryngological, Medical, Obstetrical, Odontological, Pathological, Surgical, and Therapeutical Sections. As we have already stated, the Proceedings of the Royal Society of Medicine contains the cream of English medical literature. The paper used is the best and the type clear, distinct, and attractively readable.

Part 4 of Volume 1. of the Proceedings of the Royal Society of Medicine consists of similar sections to the preceding parts, and is in itself a volume worthy of binding. In the clinical section, for instance, we find case reports by such men as Lockhart Mummery, F.R.C.S., Sidney Phillips, W. Sampson Handley, J. Graham Forbes, A. E. Barker, F.R.C.S., and Herbert French. In the dermatological section are found articles by such well-known writers as H. Radcliffe Crocker, J. H. Sequeira, and J. A. Ormerod. Under laryngology Sir Felix Semon, Herbert Tilley, F.R.C.S., and Cresswell Baker give cases and exhibit specimens. Part 4 of Volume I. is fully up to, if it does not excel, its predecessors.

The Production and Handling of Clean Milk. By Kenelm Winslow, M.D., M.D.V., B.T.T. (Harv.), formerly Instructor in Bussey Agricultural Institute, and Assistant Professor in the Veterinary School of Harvard University; author of a textbook on Veterinary Materia Medica and Therapeutics; Chairman of the Committee on Milk of the Washington State

Medical Association, etc. New York: William R. Jenkins Co., Publishers. 851-853 Sixth Avenue.

The scope of this work may be gathered from the contents, viz.: Chapter I.—Germs in Their General Relation to Milk. II.—Composition of Milk and Cream and Their Products. III.—Milk Products. IV.—Feeding for Milk. V.—Housing and Care of Cows. VI.—Handling of Milk and Cream. VII.—Cost of Producing and Distributing Clean Milk. VIII.—Some Hints Concerning Milk Distribution. IX.—Milk Inspection. Appendix.—Plans of Barns, Milk Houses, etc.; General Outline of a Scheme for the Control, Supervision and Inspection of a City Milk Supply. Index.

While much of the book relates to the inspection of milk, and would belong to the domain of the medical health officer, most of it is taken up with problems of special interest to the dairy farmer. When the farmer learns that he can produce clean milk without great expense, in ordinary barns and milk rooms, and can, by so doing, make more money, even with the added expense, milk supplies will improve in quality.

For bottling milk at the farm the author prefers paper bottles to glass ones. He objects to the constant dipping into cans in retailing small amounts of milk, which causes the contamination of the milk. The book is finely illustrated. The type is clear and large.

J. J. C.

A Therapeutic Guide to Alkaloidal-Dosimetric Medication. By John M. Shaller, M.D., former Professor of Physiology and Clinical Medicine in the Cincinnati College of Medicine and Surgery, former Professor of Comparative Physiology in the Ohio Veterinary College. Second edition. Enlarged and revised. Chicago: The Clinic Publishing Co. 1907. Canadian agents: W. Lloyd Wood, Limited, Toronto.

There is perhaps no better way for an author to judge as to the merits of his book than by the reception it receives from its readers. Dr. Shaller, the author of "A Therapeutic Guide to Alkaloidal Medication," should be satisfied to think that several editions of his little book have been called for since it first came from the press. His volume consists of notes from his lectures delivered before the students of the Cincinnati College of Medicine and Surgery. It deals largely with drugs and their physiological action, and, though somewhat elementary for the average practitioner, is full of common sense, pointing out how important it is to study, first, normal physiological action, and then to apply the proper remedy to restore any abnormality found to exist.

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Original Contributions.

MALIGNANT DISEASE OF THE NOSE.

BY D. J. GIBB WISHART,
Associate Professor of Rhinology and Laryngology, University of Toronto.

The remarks that I have to make upon this subject are intended to be a recital of the cases that have fallen under my own particular observation, rather than an endeavor to put forward anything new, either with regard to the etiology or to treatment, and I therefore propose to confine myself to a narration of these cases, followed by a few remarks.

These cases are nine in number, but of these the histories of two are not available, but the remaining seven are as follows:—

CASE 1.—Mr. J., merchant, aged 54, referred by Dr. Howitt, October 14th, 1894. Complaining of stuffy sensation in the left nostril, accompanied by a slight bleeding, some clots being ejected every day when the nose is blown. General health is poor.

On examination, a bleeding polypoidal mass, with enlargement of the turbinal (inferior), was noted.

Two weeks later the above-mentioned growth was removed with the snare, and uncovered bone was made out, both on the upper part of the septum and in the ethmoidal region.

The patient was not seen again until May, 1905. He had contracted grippe early in the year, during which he suffered frightfully from neuralgic pain in the left parietal region and over the left frontal sinus. The left nostril is occluded by a large bleeding mass, from which there is an offensive discharge and odour. The cheek has been swollen for three weeks, and the left nasal duct is occluded. A small portion of the growth was removed for examination, upon which the report was as follows:—

External Appearance.—Four or five small polypoidal-looking

growths, from a third to half an inch in length, white, surface smooth and white on all sides, and somewhat soft in consistency. The substance was made up of fibrous matrix and alveoli, containing rather loosely packed cells. The matrix consists of soft-looking fibrous tissue, with numerous connective tissue cells, oval, spindle and triangular. The fibrillation is not very distinctly marked, the cells are not markedly epithelial in character, the nucleus occupying a very large part of the cell and staining sharply. The arrangement points more strongly to carcinoma than to sarcoma. The growth is probably carcinoma of a scirrhous variety (alveolar).

After consultation with Dr. McDonagh, operation was decided upon. An incision was made through the cheek from the left inner canthus downward, parallel with the nose, and a second incision, beginning at the same point and extending outwards underneath the orbit. The flaps were dissected back and a portion of the nasal bone, the nasal process of the superior maxilla, and the outer wall of the antrum were removed, and the growth found occupying the upper portion of the antrum, and the ethmoidal region, as far back as the sphenoidal sinus. The floor of the orbit and body of the ethmoid, with the outer wall of the nose, were completely removed with the growth, and a large quantity of pus evacuated from the sphenoidal sinus. The incision healed by first intention. On the fourth day the patient complained of great pain in the head, especially in the vertex, with tenderness in the neck, defective speech, faulty memory, and a temperature vacillating between 87 and 101 degrees. These symptoms gradually disappeared, and the patient was seen for the last time on the 20th of July, when, with the exception of a large granulation, the nose was found perfectly healthy and the general condition much improved. The patient was sleeping poorly, but was suffering no pain. I did not see him subsequently, but learned that all the symptoms returned, and that he gradually sank, and died some months later.

Case 2.—Lionel P., age 17, mailer; referred by Dr. Gordon in January, 1900. Complained of a stuffing up of the left side of nose for past six months; right side became stenosed later; voice is dead; blood comes away into throat and through anterior nares at night. Hearing is failing in the left side. Pain, loss of flesh and failure of health are absent.

On examination, a smooth, evenly rounded, resistent mass occupies the outer wall of the left nose towards the back, and has pushed over the septum to the right. Post-nasally, a mass can be made out, filling the posterior nares, but not protruding backwards. The color is similar to that of the surrounding tissues. There is no sign of a bleeding point.

The patient was not seen again for three months, when all the symptoms were found increased; the growth was nearer the

anterior nares, and soft and movable in places; the soft palate was depressed, and a large whitish mass protruded into the naso-pharynx. There was a marked odor.

Beyond a note that the galvano-cautery was applied two days later, I have no further notes of the case, or of the pathological report, but he came later under the care of Dr. Price Brown, who obtained excellent results, as he has already reported.

Case 3.—Miss G., nurse, aged 35, referred by Dr. H. B. Anderson, October 22nd, 1902, with the following history: Fatigued by her work, the patient, who was of a thin, nervous build, came home for a rest, and in June consulted the family attendant about pains about the head and face, which were ascribed to neuralgia due to residence in a very damp house, and were relieved by suitable anti-neuralgic treatment. At this time the face, eyes, nose and mouth were carefully examined, as the mother stated that she had dreamt that the pains were due to a tumor behind the eye.

The patient was not seen again till the middle of September, when the pains had returned. She was kept under observation, and as she began to complain of a stuffy sensation in the left nose, with an occasional bloody discharge, and to show some bulging of the left eye, she was admitted to the hospital. On examination, I found an irregular mass growing in the region of the middle meatus on the left side of the nose, a well-marked proptosis of the eye, and by transillumination an absolutely dark antrum. A section removed from the nose showed the growth to be a round-celled sarcoma. The origin of the growth was probably from the roof of the orbit, and it had involved the antrum, invaded the orbit, and extensively involved the ethmoid. Operation was not consented to, therefore the patient was immediately put upon Coley's fluid, injections of a half minim, locally as well as at distant points, being as rapidly as possible increased to doses of three and a half minims, at which point the treatment had to be moderated as the depression and chills attendant were too severe.

A combination of smaller doses of the fluid, with fluorescent rays, were then adopted for a time, but beyond a slight check no improvement was noted. The patient died in the end of March, 1903, after the growth had involved the neighboring tissues extensively.

For these notes I am indebted to Dr. Anderson, as the hospital records were destroyed.

Case 4.—Mrs. S., aged 62, referred by Dr. Grey, July, 1904. Complained of bleeding and pain in the left nose for past six weeks. The bleeding was not severe, but continuous, an average of eight handkerchiefs per day being soiled thereby. The pain is in the left nasal bone, extending outwards under the eye, dull in character and intermittent. There is complete left nasal stenosis.

General health has been very poor, but of late is improving. There is no history of any blow or injury.

Examination by transillumination showed the left antrum completely obscured. A tumor filled the middle meatus and extended back into the posterior nares. A portion was removed for examination and was reported by Dr. H. B. Anderson to be round-celled sarcoma.

Operation was advised, and this was performed by Dr. Teskey, assisted by the writer. The incision was made through the cheek in a line extending from the inner angle of the orbit downwards and slightly outwards to the mouth. The tumor was entirely removed and was found to fill the antrum and to have a probable attachment to the floor of the orbit, which, with the inner and posterior walls of the antrum, were fully removed. The glands were not involved, and the bleeding was very severe.

I am indebted to Dr. Grey for the additional notes. The wound was slow in healing until the patient was put upon small doses of iodide of potash. The discharge ceased in a few weeks. In the following May a sloughing ulcer appeared on the joint of the right great toe, this was healed at the end of six months, but two months later an ulcer appeared upon the left foot, which healed, only to be followed by an ulcer upon the front of the right tibia, which progressed unfavorably, was followed by general septicaemia, which resulted in death in May, 1906. At no time was there any evidence of a return of the growth in the nose or in any part of the face.

Case 5.—David Y., aged 57, referred by Dr. Barber, November, 1906. Complains of very severe pain in the left side of the face below the eye, and also from the ear down the ramus of the jaw. Onset occurred about one year ago, but the chief suffering has been within the last four months. Has expelled a thick clot of blood from the left nose now and then, and of late has suffered from dysphagia and marked loss of flesh.

On examination, the following conditions were found: Nose.—Right side absolutely free and patent, with septum deflected to left posteriorly; left side unusually patent in front, but apparently filled up from floor to roof posteriorly with an indefinite mass, which bled on being probed, and was coated by pus points. Pharynx.—Soft palate swollen on left side, as if pressed down from above, and firmly fixed, leaving very free access to the naso-pharynx, which is filled up on its left side by an irregular mass, apparently pedunculated, but, on palpation, found to be fixed extensively to the left side and very firm in consistence. Transillumination is negative. Hearing left ear watch equals pressure. Optic disk healthy. The patient is weak, easily fatigued and anaemic.

The patient was admitted to the hospital, and, under cocaine, several applications of the galvano-cautery, with removal of the slough by snare and forceps, after the method advocated by Price-Brown, were made at intervals, and respiration restored on the left side. The bleeding was slight, but the suffering continued very severe, and morphia became a constant necessity, while the patient grew weaker rapidly, and finally refused to submit to further applications.

The anesthesia was never satisfactory, as if the cocaine were pressed collapse became imminent and the patient suffered severely from each application, but refused to submit to general anesthesia. Slight loss of power in the left external rectus was noted the day before he left the hospital.

The section removed by the cautery was submitted for examination, and reported "malignant."

Case 6.—Mr. J. H. M., aged 48, blacksmith, referred by Dr. S. H. Thorne. Was seen for the first time October 24th, 1907, and gave the following history: Many years ago the nose was broken, leaving a projection on its right slope about opposite the lower end of the nasal bone. Some right nasal stenosis noted twelve months ago, which became complete about six months later. There has been a constant oozing of a sanious muco purulent discharge, sufficient to soil from three to four handkerchiefs per day. Until the past month there has been no pain about the face, but of late there has been occasional soreness and tenderness to the inner side of the right eye. Frontal and occipital headaches of a severe type have been present until the past ten days. There has been swelling and bulging present in the right side of the nose for the past six months, increasing of late. Patient has lost twenty pounds in weight in the past year, but is otherwise in perfect health. There have been no ear symptoms, no diseased teeth, no epistaxis, no post-nasal dropping, and no treatment of any kind. Upon examination, the following points were noted: The nose presents a crescentic curve to the right, with some general bulging of that side of the nose and slight tenderness upon pressure opposite and below the inner canthus; an irregular growth projected from the external wall close to the entrance of the right nostril, resembling degenerated polypoidal tissue. The stenosis was complete. The left chamber of the nose was capacious and perfectly free. Rhinoscopically, there were no evidences of disease whatever, and a complete view of both choanae was easily obtained. Vision normal in both eyes, with the assistance of a convex lens; optic discs normal. With transillumination, the light penetrated the left frontal sinus satisfactorily, but the right sinus seemed small and indistinct. No penetration could be obtained on either side of the face. A small porton of the growth was removed for examination

by the pathologist, and the hemorrhage was not marked. No evidence existed of enlargement of glands.

Dr. Cummings kindly examined the patient with the fluoroscope, and reported that the antrum and ethmoidal regions appeared to be completely occluded with growth, and that the frontal sinus, which was small, was hazy, and probably filled with pus.

Microscopic Report on Pathological Specimen.

Irregularity in size and shape of the nuclei is a marked feature; variations from a small round to elongated and large nuclei. Mitoses are frequent, as many as four being noted in one field, immediate division also being found.

The cell protoplasm in many fields runs together so that no cell outline is discernable. In other places the cells are distinct, occasionally the excentric nucleus of the "plasma cell" being noticed.

Blood vessels are not plentiful, but when found no living endothelium can be made out.

The sections from septum of nose differ only in seeming to have a more orderly arrangement of the neoplastic cells, and in showing a greater number of endothelium cells scattered throughout the section.

Sections were stained with eosin methylene blue, but did not stain very distinctly.

From the above examination it appeared evident that a complete evisceration would be required of the right nasal fossa and antrum, and that possibly the frontal sinus would require to be opened. The patient, however, desiring as little deformity as possible, and the skin of the face being uninvolved, it was decided to reach the parts in the first place by a Rouge operation, and, if subsequently found necessary, to perform a Killian operation upon the frontal sinus.

The patient was anesthetized and a preliminary laryngotomy performed, after the manner described by Butlin and Bond in the *British Medical Journal,* January 5th, 1907, page 7, which is, briefly, as follows: the skin is pinched in a vertical fold at a point opposite the upper border of the cricoid cartilage; this is transfixed transversely with a tenotomy knife, and the forceps placed upon one small vein which was bleeding. A pair of sharp-pointed scissors, curved on the flat, are then forced through the crico-thyroid membrane close above the margin of the cricord cartilage, and the blades opened and withdrawn. Into this incision is placed a pair of dilating forceps, between the blades of which a small canula is inserted. Through this the anesthetic was continued; the pharynx was then thoroughly packed with a long strip of gauze, and the operation proper proceeded with. The gingivo-labial margin, from the level of

the first molar tooth of the right side to a corresponding point upon the opposite, was then incised to the bone, and the tissues pushed up until the structures issuing from the infra-orbital foramen of the right side were exposed, together with the anterior nares, to secure which a perpendicular incision was made in the front part of the septal cartilage; the tissues were kept well retracted by the assistant, and the anterior wall of the antrum removed. At this point the hemorrhage from the growth became very severe. As quickly as possible the whole of the anterior wall of the antrum and the outer wall of the nose were completely removed and the contents evacuated. The turbinal bones and the innermost ethmoid cells were all absorbed or existed only in small fragments, but with the curette all the ethmoidal cells were carefully removed until the cribriform plate of the ethmoid was made smooth, and a smooth surface also obtained upon the outer wall. In doing this the sphenoidal sinus was also opened and made part of the cavity by the removal of its anterior and inferior walls. At the same time it was discovered that the mucous membrane over the ethmoidal portion of the septum was degenerated and the bone laid bare at one or two points. All the mucous membrane, bone and cartilage of the upper half of the septum on that side were carefully removed; but as the mucous membrane of the opposite side seemed to be healthy it was left in place.

To gain access to this large area, the nasal process of the superior maxillary bone had been removed entirely as far up as the floor of the frontal sinus. This was now examined, and a thick, ropy, gelatinous, whitish fluid was found exuding through the remains of the infundibulum, but the bone was found healthy in all directions, and as it was found impossible to remove the floor of the sinus without a skin incision it was deemed fair to leave the sinus alone.

The wound was then thoroughly cleansed and swabbed with chloride of zinc, and lightly packed with iodoform gauze, after which the skin was allowed to fall back into place and no stitches were inserted, but after the instillation of atropine the eye was carefully bandaged.

During the entire operation the patient gave no trouble, and on removal of the gauze packing from the pharynx the lower parts were found quite dry.

The patient made an uninterrupted recovery, the gauze packing being removed on the second day and not replaced, the cavities douched with an alkaline solution and dusted with iodoform powder. The appearance of the face was not affected except by the removal of the dimple of the right inner ala nasi, the patient's eye not even being discolored.

Case 7.—Powell Pompier, 17, Italian laborer. Blocking and bleeding on the right side of the nose. Noticed first about August,

1906, before he left Italy, but does not appear to have received any treatment. Came to Canada, and has been engaged in railroad construction in the north, during which time the two conditions referred to have become worse, and, in addition, he has lost the sight of the right eye completely. Entered hospital in November, 1907, when the following conditions were present: Right nostril completely occluded by a greyish mass of irregular appearance, bleeding easily. The ala and nasal bone swollen or pushed out by the mass above mentioned. The right eye protruding, and the upper eyelid drooped, and there is a swelling on the outer side of the orbit above the zygoma. On opening the mouth the right palate is darkened in hue, and towards the back of the hard portion it bulges downwards. In the post-nasal space a smooth mass occupies the space almost entirely, but is not attached to either wall, and the finger can be passed below the mass to the septum, a proceeding followed by rather free bleeding. The odor from the nose is most offensive. The glands are not enlarged. The examination of the eye was kindly made by Dr. Reeve, who reported paresis of the external rectus and levator palpebræ superioris muscles; fundus apparently normal; movements of the eye, except as above, quite satisfactory. The growth has probably invaded the back of the orbit, behind the attachments of the external muscles, and crossed to the outer side, involving both the third and sixth nerves and the optics. A section was removed from the nose for the pathological department, which is stated to be purely inflammatory, without evidence of malignancy.

After consultation with the members of the Ophthalmic and Oto-Laryngologic Section of the Academy of Medicine, it was decided that the case was inoperable, the growth probably arising in the ethmoid region, and being too widely diffused to admit of successful removal. A few days later, as the bleeding was becoming serious, the external carotid of the right side was tied with ordinary catgut; circulation established itself within ten days in the temporal artery, and bleeding became more severe. Believing this to be due to the absorption of the catgut before a firm clot was formed, the artery was again cut down upon and tied, no sign of the previous ligature being visible, and circulation fully established.

Sarcoma is stated to be the most common form of malignant disease found in the nose, and my cases conform to this rule, four being sarcoma, one carcinoma, one unclassified, and the one where the pathologist is at fault will probably prove to be sarcoma when a deeper section is obtained for examination.

As to the percentage which these bear to the number of patients seen, I cannot speak further than to say that the proportion is probably somewhat large, as Herzfeld reports only one case among 28,000 out-patients, and Finder five cases among 40,000.

Sarcoma is stated by Lack to spring most frequently from the anterior part of the nasal septum, but not one example of this seat of origin has come under my observation, the ethmoid or the floor of the orbit being the probable point of origin in all but two, the others being uncertain, but probably from the outer wall below the middle turbinate. This would coincide with Finder, who says that 50 per cent. spring from the middle turbinate, and 21 per cent. from the inferior turbinate body.

Sarcomata are usually of the small spindle-celled variety, but my pathological reports are not detailed enough to make inferences justifiable. However, none of the remaining varieties except round-celled were present.

Among the symptoms present, the observations with regard to the frequency of epistaxis and pain are well borne out; in only two of the cases did the bleeding cause marked depression or anemia (cases 4 and 5). Pain was an early symptom in three, absent in two, and late in one.

Upon the question of cause, I fail to see that my cases afford any clue. In one (case 4) there is a possibility that syphilis was co-existent, that is, if the beneficial action of iodide of potassium implies the presence of syphilis, which I do not admit. The lesions in the legs may have been of the nature of metastases. The idea has been advanced that the ordinary nasal mucous polyp may, as the result of repeated removals, undergo malignant transformation, but in only one of my cases (case 1) could such a transformation have arisen, as mucous polypi were not present in any of the others, and in this I believe that the bleeding and the diseased bone indicate the contrary, and, further, that if I had been sufficiently upon the alert and secured a pathological examination of the polyp malignancy would have been found. No cases of nasal polypi which have passed through my hands, and of these I have observations extending over many years and repeated examinations at long intervals, have ever shown a tendency to become malignant.

The average age of my cases (forty-one years) is above the usual, which is stated by Bosworth to be under thirty-nine years.

What is to be said with regard to treatment, for this is, after all, the important question from the patient's point of view? Coley's fluid was used in only one of the cases here discussed, but I used it in another, a girl of about twenty, of whose history I can only find a couple of photographs; and here also, although it was thoroughly tried, it proved of as little avail as in case 3. This experience would not discourage me in using it again if the case came under observation at an early stage, but, unfortunately, this is not usual.

The only other method of treatment that I have attempted is surgical removal, and here I have had no successes except in case 4, where life was certainly prolonged, and I have hopes that in case 6,

if I can keep it under observation so as to apply the cautery to any suspicious points at once, I may be able to prolong life by at least two years. Some form of operation, I am convinced, is, however, the only method of treatment that we can adopt with the data at our disposal at present, and yet we have to confess to our patients that our most recent authority, Lambert Lack, states that "it is probable that almost every case of sarcoma of the nose ends fatally," "that in my most successful case of alveolar carcinoma recurrence took place in a little over two years after operation"—while in squamous carcinoma the fatal issue may be postponed four to five years, or even longer.

THE SIGNIFICANCE AND TREATMENT OF UTERINE HEMORRHAGE.

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The history of gynecology is accentuated by progress. In glancing over its pages the student is astonished at the rapid strides made to alleviate the ills of womankind. It is a chapter written within the present century, and written with glowing pen and on emblazoned paper, recording the daring of Dr. Ephraim McDowell, of Kentucky, who in 1809 performed the first laparotomy on a poor woman in the wilds of Kentucky, without anesthesia, an event which marked the beginning of intra-pelvic gynecologic surgery. Perhaps the brightest page in this chapter contains the wonderful discovery of Dr. Crawford W. Long, of Georgia, who on March 30th, 1842, used ether for the first time as an anesthetic, while operating upon James Venable, from whose neck he removed, without pain, a large tumor—robbing, for all time, the operating table of its dreadful horrors. Another page in this chapter records the brilliant labors of the great Marion Sims, a native of South Carolina, who in 1845-9 described for the first time his operation for "vesico-vaginal fistulæ." He also gave to the profession his "duck-bill" speculum (which bears his name) for the exposure of the fistulæ with the patient lying in the left semi-prone position. Elsewhere in this same chapter we find a description of "Battey's operation," first performed by Dr. Robert Battey, of Rome, Ga., who on August 17th, 1872, performed the first oophorectomy in this country upon a nervous, hysterical woman, whose menstrual periods, prior to the operation, almost drove her to madness. This operation was successful, adding years of joy and happiness to his former invalid patient.

New operations, improved surgical technique, and new therapeutic remedies have been the means of giving the suffering woman a new lease of life. These new methods and measures must usurp the attention and command the co-operation of every thoughtful gynecologist. He must forsake his ultra-conservatism and pay due homage to whatever in his experience has most abundantly redounded to the amelioration of the ills of suffering woman.

The gynecologist should be a good listener, that he may fully grasp the importance of the symptoms which his patient confidingly recites. He must be able to judge human nature in order to carefully weigh the evidence submitted and correctly interpret its bearing on the case. When a woman comes for consultation and gives a history of uterine hemorrhage, we should be very thorough in our interrogatory examination, since bleeding from the uterus is one of the most common complaints for which the physician is consulted. The causes are numerous and the diseased conditions manifold.

This paper is intended to be intensely practical, and the writer hopes his labors may be of some help to his fellow practitioners, and thereby benefit womankind. If we succeed we shall feel amply repaid for the time and labor spent in its preparation. In considering the treatment of uterine hemorrhage we have before us a subject of momentous importance and one requiring much thoughtful study. Hemorrhage from the uterus may indicate:

Adenoma Malignus.—Here the hemorrhage is less profuse, the discharge is less abundant, and the odor less offensive than in cancer.

Cancer of the Body of the Uterus.—Here the bleeding may be intermittent and copious, or constant and dribbling.

Cancer of the Cervix, a persistent watery discharge tinged with blood usually associated with fetor; later profuse and violent hemorrhage may occur.

Deciduoma Malignum.—In this condition there is intermittent hemorrhage, usually severe, followed by an offensive, turbid, watery discharge; blood clots may be found.

Ectopic Gestation.—Agonizing pain, faintness and collapse are indications that the tube has ruptured and violent hemorrhage present.

Endometritis begins with a dull, aching pain, accompanied by purulent and oftentimes bloody secretion; menorrhagia and metrorrhagia are common.

Fibroid Polypi..—Here will be found a profuse, purulent discharge; menorrhagia with colicky or propulsive pains, the bleeding dribbling or severe flooding.

Fibroid Sarcoma.—There may be a torrential hemorrhage occurring with alarming suddenness and severity, or there may be only a continual dribbling, as in cancer of the body of the uterus.

Inversion of the Uterus.—Here the hemorrhage is very profuse, accompanied by a dragging or pulling sensation.

Lacerated Cervix.—In this condition the hemorrhage is usually slight.

Oophoritis (chronic) is attended by menorrhagia, especially in cystic ovary, which gives rise to a most intractable form of uterine hemorrhage.

Ovarian Cyst.—As in cystic oophoritis menorrhagia and metrorrhagia are common.

Retro-displacements.—Menstruation is usually profuse, with aggravated reflex disturbances.

Salpingitis, increased frequency and duration of menstruation, bloody discharge accompanied by pain, quick pulse and persistent elevation of temperature.

Simple Cysts of Ovary.—Occasional hemorrhage and metrorrhagia.

Subinvolution of the Uterus.—Backache, anemia and malaise, depression of spirits, profuse menorrhagia.

Uterine Fibroids, pressure, pain and hemorrhage either at or in the intervals of menstruation.

Uterus, Prolapsus of—pelvic pain, weight and dragging sensation in acute prolapse; when ligaments are torn, profound shock and agonizing pain, attended with internal hemorrhage.

The above are a few of the diseased conditions that we will be called upon to treat which will be accompanied by uterine hemorrhage. Some of these cases will be easily diagnosed and yield readily to treatment, while other cases will come to us in which no abnormal signs can be found on physical examination, and in which treatment will prove extremely unsatisfactory. Still there are other cases which can be cured only by surgical intervention. Many of the patients presenting themselves for consultation will be women between twenty-five and thirty-five years of age—a period of life when menstruation should be regular and normal. In many of these sufferers, beyond a slight enlargement of the uterus and a somewhat toneless condition of the uterine muscle and appendages, there is nothing abnormal which can be discovered on the most painstakingly careful bi-manual examination. While operative gynecology has made rapid advancement, saving the lives of many women, the non-surgical or conservative workers have been "up and doing." Scientific pharmacologists and chemical laboratory workers have greatly aided the conservative gynecologists.

Whatever may be the correct interpretation of the pathological changes present in uterine hemorrhage, the fact remains that the control of the bleeding is often a very difficult problem, especially in those cases unsuitable for surgical intervention, and the drugs which we have at our command for the control of hemorrhage often prove disappointingly unsatisfactory. Frequently cases come under observation in which the usual hemostatics and styptics, such as ergot, hydrastis, hamamelis, gallic and tannic acids, per-sulphate of iron and other drugs of this type, have been used without even the slightest signs of alleviating the hemorrhagic flood. The cervix has been dilated, the endometrium curetted, and still the patient bleeds. In the past, in such cases, the woman had to give up her organs or bleed to death. The writer recalls a patient—a dear, good little woman—who literally bled to death, ten years ago, because she refused hystero-salpingo-oophorectomy—the only chance of saving her life.

Conservatism in gynecology has been a stimulus to the broadening of therapeutic effort, and has saved countless numbers of women from needless sacrifice of organs and other surgical mutilation that in so many instances failed to bring relief. We are sometimes compelled to remove a uterus because of our inability to check uterine hemorrhage permanently, as its recurrence is often to such an extent as to greatly endanger the life of the patient, and when the organ has been extirpated the pathologist will open his eyes in surprise to see how comparatively trifling the organic changes will be. If uterine hemorrhage occurs after parturition or abortion, we know the cause—faulty contraction of uterine muscular fibre. The open blood vessels gape through the atony of the muscle, and we all know that any remedy which causes firm contractions of the uterine muscle will stop hemorrhage. A uterus infiltrated by small fibro-myomata, or which is chronically inflamed, is an entirely different case. In such cases an abnormal growth of tissue is present, a growth which compresses the muscular fibres, hindering them from contracting with sufficient force to control arteriosclerotic ones which gape wide open in spite of muscular contractions, due to the rigid surrounding connective tissue.

In these cases only such remedies are worth the while, except those which act independently of muscular contraction. Dr. Abel, of Berlin,[1] says he has had occasion to examine microscopically uteri which had been removed on account of uterine hemorrhage when all other treatment had failed. He avers on examining these uteri he has observed that the capillaries are greatly dilated in the mucous membranes which have been the seat of severe hemorrhage, therefore he declares that ulcerative processes

were present exposing the vascular loops on the surfaces of the uterine mucous membranes.

We can readily understand how such uteri become the seat of extensive hemorrhage, and that this bleeding can only be controlled by a remedy which influences the vaso-motor nervous system directly, promptly counteracting the irritation that induces the dilatation of the capillary vessels. Such a remedy is the neutral phthalic acid salt of cotarnin. Cotarnin was discovered by Woehler,[2] who obtained it by the oxidation of the opium alkaloid narcotine by means of manganese dioxide and sulphuric acid.

Pharmacology.—Cotarnin phthalate is a yellowish microcrystalline powder containing 75 per cent. of cotarnin. It is readily soluble in water, with a feeble alkaline reaction. Its melting point is 113 degrees C., and it is represented by the formulæ—

$$(C_{12}\,H_{16}\,NO_3)\ 2\ C_8\,H_6\,O_4$$

It contains two active hemostatics, as not only the cotarnin is noted for its hemostatic and sedative action, but valuable styptic properties are also claimed for the phthalic acid. According to Lockyer,[3] cotarnin is chemically related to hydrastine, the latter containing stypticin, the hydrochloride of cotarnin.

Physiological Action.—Cotarnin phthalate exerts no action on normal blood-vessels, nor does it produce a rise of blood pressure, but its action in the main is directed to the capillaries dilated by inflammatory changes. Its physiological action on the uterus has been studied by Mohr[4] and Abel, of Berlin, and by Chiappe and Ravano in Bossi's Clinic at Genoa.[5] These investigators agree that cotarnin displays not only a powerful hemostatic, but also a sedative action. It might be supposed that as a derivative of opium it would depend for its hemostatic action upon central causes, but Vieth and others aver that this is not so, since the drug does not occasion a general rise of blood pressure; he regards the uterine hemostasis as a purely local action, and supports this view by the statement that when used externally it causes hemostasis by vaso-constriction.

Quoting from Lockyer, he believes that after absorption by the blood, "cotarnin has the peculiar property of causing constriction of the uro-genital vessels only." This action, he avers, is caused by the stimulation of their local vaso-motor plexuses. Cotarnin does not affect normal vessels in other parts of the organism, hence a general rise in blood pressure does not occur. While its action is very prompt in the arrest and control of uterine hemorrhage, yet it does not allay the bleeding in hemoptysis and hematemesis.

Toxic Effects.—After the administration of a lethal dose, say Abel and Mohr, there first appears a sedative effect, exactly as with small doses, but this is soon followed by excitation, which is preceded by inco-ordination and ataxia of the extremities. This excitation is rapidly followed by respiratory and general paralysis and death. Just before death the number of respirations rapidly decrease and the breathing gradually becomes superficial. To produce poisonous effects very large doses must be given, and Mohr has proved that gangrene cannot be set up by the continuous exhibition of this drug.

Therapy.—Mohr's experiments on pregnant rabbits establishes the fact that the uterus is rendered less sensitive to stimulation by the sedative action of cotarnin. This reduction in the excitability of the uterine nerves is an indication for its employment for the relief of spasmodic and congestive dysmenorrhea, and from the mass of clinical evidence collected by competent clinicians it establishes the opinion that in it we have a drug which fulfils a unique position in therapeutics, and one which can be safely given in threatened abortion. If the deductions of the German clinicians as to the physiological action of cotarnin are correct—and we believe they are—then in this drug we have a substance which has a special sedative action upon the uterine nerve plexuses, which action produces a local vaso-constriction; at the same time, from its sedative action, pain is relieved. As it causes no contraction of uterine muscular tissue it is not indicated for the relief of post-partum hemorrhage, nor for any pathological condition where it is necessary to secure continuous retraction of uterine muscle.

The first clinical research into the therapeutic application of this drug was carried out by Katz[6] in Prof. Karl Abel's clinic in Berlin. He and Abel enunciated the following deductions, dose 3 to 5 grains daily in sugar-coated tablets, and the following indications for its use were laid down. After an experience of several years, in more than 300 cases, Katz and Abel recommend it in the following cases, viz.:

1. Severe menstrual hemorrhage in virgins and nulliparæ without a pathological-anatomical cause.
2. In purely climacteric hemorrhage.
3. In puerperal hemorrhage.
4. In myomal hemorrhage, especially in cases suitable for operations; the patients, generally enfeebled by the recurring attacks of menorrhagia, are able to recover their strength when the bleeding is held in check by cotarnin phthalate.
5. In secondary hemorrhage in diseases of the appendages or of the pelvic cellular tissue. (These are the cases where suc-

cess is least certain, for many cases of this type are amenable to no other treatment than the removal of the actual cause of hemorrhage by surgical intervention.)

6. In hemorrhage due to inoperable carcinoma, in which the local application of the remedy has also been used.

7. In dysmenorrhea, when not due to mechanical causes. Because of its double sedative and hemostatic action, this drug is a safe remedy for painful and prolonged menstruation. The sedative action is hardly ever absent, provided the remedy be given in sufficient doses, two tablets three to four times a day.

8. In hematuria—bleeding from the genito-urinary tract.

Abel, in closing his paper, published in *Berliner klinische Wochenschrift,* 1905, No. 34, summarizes as follows: "I believe that in the neutral phthalate of cotarnin, styptol,* we have gained a preparation which surpasses all former hemostatics employed in gynecology, provided the indications and dosage are right, whether administered internally, locally, or by a combination of both methods. Here I should like to mention once more that the remedy possesses a pronounced sedative effect, which makes it especially valuable in gynecological practice." He quotes Freudenberg,[7] who is of the opinion that styptol cannot always replace ergotin; on the other hand Prof. Toff[8] observes that ergotin and powdered ergot have often proved unsuccessful, while styptol has always shown a reliable hemostatic effect. He even believes the time is not far distant when ergot preparations will lose their reputation, just as they have long ago been given up as abortifacients, for which they were used for decades. Weissbart[9] praises the action of the drug in climacteric and reflex hemorrhages, endometritis, subinvolution of the womb after parturition and miscarriage, and hemorrhage during pregnancy. Styptol never causes uterine contractions nor labor pains, an observation made by Freudenberg[10] which is in perfect accord with other German authors.

More than two years ago my attention was first drawn to this drug, as a remedy for the control of uterine hemorrhage. During that time I had occasion to observe its therapeutic action both in private and dispensary practice. My service, in one of the largest clinics for the diseases of women in the city of New York, has given me exceptional advantages for the study of this drug. I believe, as is claimed by the German clinicians, that the special action of the drug is principally on the capillary circulation, and that it has the power of contracting these dilated blood-vessels, in this way cutting short local congestion.

I have clinically tested the therapeutic properties of cotarnin

* Styptol has been approved by the Council of Chemistry and Pharmacy of the American Medical Association.

phthalate for the arrest and control of uterine hemorrhage, and append hereto a few clinical histories taken at random from my notebook, which will serve to illustrate the value of this drug in the treatment of uterine hemorrhage.

In December, 1905, I was called in consultation to see Mrs. S., aged 32. She first menstruated in her fourteenth year, was always regular as a girl, but suffered a great deal of pain during the periods, which were very profuse; married twelve years, two children and two miscarriages—the last two years ago; since then periods have been painful and alarmingly profuse, lasting sometimes from six to ten days, passing clots and suffering from frequent micturating; bowels constipated; vaginal examination revealed a large and bulky uterus, slightly antiflexed, and cervical catarrh *nil* in formices. Diagnosis, endometritis with metrorrhagia. Curettage advised but refused. Patient was then placed on cotarnin phthalate, one tablet three times daily, and advised to continue same until the next period, which she did, and after three months she reported freedom from her former ills.

Hillis S—, aged 31, menstruated first in her twelfth year, regular for the first two years, following this a period of nineteen months, during which time she was very irregular. Acute ovarian pain preceding each period, beginning five or six days before and continuing for the first three days of the flow, which was very profuse and weakening to the patient. This case was first observed in February, 1906. Bowels constipated, micturition normal, appetite peevish, sleep disturbed. Vaginal examination revealed a slightly enlarged uterus, freely movable, but tender bi-manually, some cervicitis with a slight erosion. Diagnosis, dysmenorrhea with menorrhagia. A curettage was advised and performed by her physician during the early part of the preceding month. I was called again in April, same year, and found patient suffering with a return of her former symptoms. She was displeased at her condition, and bewailed her plight after undergoing an operation which had been promised as a relief to her sufferings. She was placed upon neutral phthalate of cotarnin, one tablet four times daily, which was continued right along through the next period, and until the next succeeding catamenia, both of which she passed through without any trouble or inconvenience.

Rebecca S—, colored, aged 30 years, menstruated first at thirteenth year, regular for several years following; married three years, no children, no miscarriages. When I first saw her, in April, 1906, she was complaining of headache, pain in her back, leucorrhea very profuse during intervals between periods; vaginal examination revealed uterus anti-flexed; sound glided in 2 1-2 to

3 inches, tip turning to the front. On bi-manual examination a small mass was made out between the folds of the broad ligament on the left side; this mass was diagnosed as a small fibroid about the size of a small Tangerine orange. Knowing the predisposition of her race to fibroids, she was placed on a tonic treatment and kept under observation. In July, same year, the second examination found the tumor much larger, firmly fixed laterally, but slightly movable in the vertical; acute pain in the left iliac-fossa gave her considerable annoyance; she suffered nausea and vomiting during these attacks of ovarian pain; menses very profuse, occurring irregularly at periods varying from two to six weeks, and lasting from six to eleven days. She was at once placed upon tablets of cotarnin phthalate, receiving four per day, and after four months' treatment pain was very slight, menses about normal, size of tumor slightly diminished, patient better.

Mrs. K—, American, aged 38, menstruated first in her seventeenth year, usually regular, married twenty years, ten children and eight miscarriages—the last miscarriage eight months previous, since which time she has suffered from a continuous metrorrhagia; bowels constipated, appetite fickle, sleep disturbed, micturition frequent and irritating. In March, 1907, I examined this patient vaginally and found cervix lacerated, hardened and enlarged, uterus enlarged circumferentially, left ovary prolapsed and very tender, left tube a boggy mass. Diagnosis, salpingo-oophoritis. Operation advised but refused; bleeding ceased after the administration of the neutral phthalate of cotarnin, one tablet every six hours for a period of four weeks. Of course, in this instance the bleeding was controlled, but the diseased condition remains uncured.

Fannie R—, German, aged 34 years, menstruated first in her fifteenth year, always regular; married thirteen years, two children and six abortions; bowels constipated, appetite poor, sleep normal, micturition normal, complained of severe backache, pain over ovarian region, and a bloating of lower abdomen and a continuous loss of blood since last abortion. On vaginal examination found vagina relaxed and enlarged, uterus mobile, os soft and gapping, ovaries tender. Diagnosis, subinvolution with metritis. Ordered woman to bed and turpentine stupe to abdomen, hot sterile douches at bedtime, and cotarnin tablets, one every six hours. After two weeks bleeding began to subside, and at the end of one month the loss ceased and did not recur.

These few examples of a large series of cases extending over two years of practice, suffice to show the value of cotarnin phthalate (styptol) to be a most favorable one in bleeding from the uterus. I have prescribed the drug chiefly in the disorders of

menstruation, including dysmenorrhea, menorrhagia and metrorrhagia, and metritis and endometritis and other congestive lesions of the womb. The experience of others, as well as myself, proves that in this drug the gynecologist has a reliable remedy for the control of uterine hemorrhage.

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Clinical Reports, Etc.

CLINICAL NOTES FROM SEVERANCE HOSPITAL, SEOUL, KOREA.

Many of Toronto's medical practitioners will remember with pleasure Dr. O. R. Avison, who for several years after graduation practised on Carlton Street in this city. Dr. Avison was always keenly interested in the missionary movement, and a few years after receiving his license to practice he was appointed by the Presbyterian Church of the United States, one of their medical missionaries, and attached to Severance Hospital, at Seoul, Korea. We had the pleasure of hearing from our old school mate a few weeks ago, and think that the following notes from his letter to us will interest our readers. We can realize that Dr. Avison leads about as busy a life as any of us, his work for one day being quite a record. Dr. Avison writes:

"We have a good deal of interesting work out here, very varied, of course, as we cannot specialize and we must do everything that offers. Yesterday morning there came in within half an hour of each other, first, a gunshot wound, in which the ball entered the left gluteal region, passed into the abdominal cavity through the lower end of the sigmoid flexure, and then through the bladder and out of the abdominal wall to the right of the median line.

"We opened the abdomen, sutured the visceral wounds, and left an umbrella drain in the abdominal cavity, as the cavity was infected. The result is yet uncertain.

"Second, a fracture of the lower leg, about the middle.

"Third, a gunshot wound in which the ball passed through the lung.

"Before noon a child four days' old was brought in with closed anus and unable to urinate. We succeeded in relieving the bladder and did an immediate operation on the anus, relieving that difficulty.

"Immediately after dinner we put on a plaster jacket for a Pott's curvature.

"We have a busy life. I am trying to graduate a class of five young men in medicine this summer. This has been uphill work, as we had no text-books and no nomenclature, until I worked

them out. From now on the way will be easier, as I can use these men as teachers for the younger students."

[We are glad to know that Dr. Avison intends to visit America and Canada this summer, and need hardly add that we will hope to receive a call from him.]

INTERESTING CLINICAL REPORT.

The following notes of an interesting case we received from a subscriber who practices not far from Toronto, but who is too modest to desire his name to be published:

September 20th, last year, I was called in to see a patient of Dr. Slaughter's, who lives twelve miles from here. He had been treating her for appendicitis (because there was some tenderness over McBurney's point), and because his patient was in a condition of collapse, asked for a consultation. She had been treated for a similar trouble by another physician on two other occasions. Her temperature ran from 100 to 102. Pulse, 100 to 120.

On examination I found the skin over the appendix was purplish, tenderness over McBurney's point and a mass extending from that point towards the pelvis. By digital examination the mass could be felt quite distinctly pushing the uterus to one side and partly obliterating the neck of the uterus on the right side. I told the Doctor I thought it was an ovarian tumor, but he was not convinced. I advised an immediate operation, telling him we would be prepared for either. As it was his case I asked him to get the necessaries ready, but, as he has them not, he asked me to get them. I took my table, instruments, dressings, etc. Dr. Leech gave the anesthetic and Mrs. Dandy was the nurse. When everything was ready and the patient on the table I noticed Dr. Slaughter nosing around the instruments. He asked what some of them were for. As he did not go to his side of the table I asked who was going to do the cutting. I should have said, "do the patient." He replied, "I will." His clothing, which was old and dirty, was not protected in any way and he had a chew of tobacco in his mouth. He asked advice about the incision and made one about 1½ inches long. He cut down to the muscle and asked if that were what it was. The patient moved a little and he straightened her around, and in doing so, touched the table. I told him to put his hands in the carbolic solution. Before doing so he put the operating-knife in his mouth. I said, "for heaven's sake take that knife out of your mouth." He said it was only the handle. After fiddling around with his nails chiefly, he asked me if that were the peritoneum. I told him he had not cut

through the muscle yet. He held the knife at right angles to the skin. Later the patient needed more anesthetic, and while waiting he was stroking his moustache and side-whiskers with his hand. I said, "for heaven's sake take your hands off your whiskers. You have enough bugs there to poison half-a-dozen women." At the end of 45 minutes, as he had made no further progress, I asked him to let me have the knife and I would finish the operation. I removed an ovarian tumor that had become twisted on its pedicle (so that the blood supply was cut off entirely.) The omentum was about ¾ in. thick. On the ninth day he took me back again, when I opened a stitch-abscess containing about an egg-cup of pus. She then made an excellent recovery.

The next day after the primary operation I asked Dr. Slaughter if he had ever done an abdominal section before. He said he had done more amputating. I repeated the question when he admitted he had not and had not even assisted. I have been here fifteen years and I never met him at *any* operation in any capacity whatever and never *heard* of him doing an operation in that time. I then asked him if he thought it was fair to his patient for him to try that operation. He said he had decided that when a man wore glasses he should do no more operations.

Dr. Leech was so annoyed he said since that he would never again give an anesthetic for Dr. Slaughter.

As a matter of fact, he thought I would tell him how to do it and he would get the credit. Did you ever, ever hear of such a case, and particularly in this age of antisepsis? A twentieth century operation surely. Now, this is too long to publish, but I thought you would be at least interested. If you are not interested you will be punished by this long narrative.

A. S. T.

POST-GRADUATE CLINIC.

The second meeting of the Post-graduate Clinic was held in the surgical theatre of the Toronto General Hospital, on Saturday, March 28th, 1908.

Dr. George A. Bingham operated on two patients under spinal anesthesia (stovaine), a description of which follows in this article.

Dr. Duncan Anderson administered the anesthetic, prefacing the operation of injecting the stovaine by the following remarks:

About ten years ago Bier, following the suggestion of Corning, of New York, attempted spinal analgesia by injecting cocaine into the spinal sac. He then experimented upon himself and assistants. The after effects were so severe that he abandoned it until stovaine was discovered, some three or four years ago, by O. Fourneau.

Since then the after effects have been much less severe. The results produced, however, have been wayward and uncertain. The German and French investigators have used solutions of very different specific gravities. Chaput's, for example, has a sp. g. of 1082, while Bier's solution has a sp. g. of 1005. As the sp. g. of the cerebro-spinal fluid is 1007 it will be noticed that Chaput's solution is much heavier, while that of Bier is much lighter than the cerebro-spinal fluid. They claimed that the distribution of the analgesic fluid in the spinal sac takes place in one of two ways, or by a combination of both: (1) By diffusion. (2) By shifting the entire column of cerebro-spinal fluid. As a rule they use a large syringe, and suck out cerebro-spinal fluid to mix with the solution, the whole being subsequently injected.

Professor Barker, of University College, London, after investigating the matter carefully, decided that gravity was the principle of distribution of the fluid. Consequently, he had a solution made consisting of stovaine 5 centigrammes, glucose 5 centigrammes, and water to make 1 c.c. The sp. g. of this solution is 1023—much heavier than the cerebro-spinal fluid. He found that when the injection was made in the sitting position, complete analgesia would occur in the perinæum. When made with the patient lying on the side with slight elevation of the head and pelvis it would pool in the dorsal curve, and analgesia of that side and leg alone occur. If the patient was quietly turned over on the back immediately after the injection, analgesia of the abdomen would occur up to the nipple line.

Technique: The back is prepared as for operation, but is finally washed thoroughly with hot sterile water, to remove any trace of chemicals. The careful placing of the patient is of the utmost importance, he should be placed on his side with knees well drawn towards the chin, head well elevated, pelvis raised about two inches. After the injection he is quietly turned over on his back with the head and pelvis still raised. The syringe employed is an ordinary "Record" of 2 c.c. capacity. The puncture is made at either the 2nd or 3rd lumbar interspace. The 4th lumbar spine is on a line with the iliac crests. The point of the needle is entered just above this, exactly in the middle line, pushed forward and a little upward for about an inch, when it will be felt to enter a space. The stylet is then withdrawn and the needle pushed further on, when it may be felt to puncture a membrane and cerebro-spinal fluid will flow in fast or slow drops. From 5 to 10 c.c. is allowed to escape when the injection is made. It is absolutely necessary to find the fluid in the sac before making the injection.

The first operation to-day is for double inguinal hernia in a man aged 48. He is very nervous, an alcoholic and had a stroke four years ago. 9 c.g. of stovaine injected; numbness to pubes in

ten minutes; 3 c.g. more injected. Fully anesthetized up to the umbilicus in 3 minutes. Operations lasted 58 minutes; patient perfectly comfortable throughout. The anesthesia extended up to the nipple line by end of operation.

2nd. Case. Woman, aged 26; removal of head of first metacarpal bone of left foot; 4 c.g. injected; kept on left side throughout operation. Anesthetized up to ribs in three minutes, later up to axilla and complained of some tingling in left arm but no analgesia present in the arm. Could move the right leg, and sensation in it not affected until she was turned over on her back at end of operation, when it also became anesthetized. Felt no pain, and was perfectly comfortable during the entire operation.

We have employed spinal analgesia in the following cases: Intestinal anastamosis, 1; Appendectomy, 1; Prostatectomy, 1; Ventral Suspension, 1; Ventral hernia, 1; Inguinal (double), 1; Inguinal (single), 2; Femoral, 1; Sequestrotomy, 2; Hemorrhoids, 2; Urethrotomy (Ext.), 1; Removal of Metacarpal bone, 1.

In one case we were unable to reach the sac in a big muscular laborer. I believe this was due to faulty technique as it was my second attempt. In all cases the anesthesia has been complete and satisfactory in every way, and lasting from fifty minutes to 2 hours. Slight nausea in two of the cases in young men shortly after the injection was made.

Dr. J. F. W. Ross conducted the clinic on April 11th. The first patient shown was suffering from inoperable cancer of the breast primarily, with a secondary growth (probably of the sigmoid flexure) in the pelvis. The family history was unfavorable, the mother having died of "ulceration of the bowels." The patient was struck by a stick on the breast and noticed a lump a week after. This is a common incident in such cases. Latterly the patient has suffered from symptoms of intestinal obstruction, the vomiting and colic being rather distressing. Dr. Ross called attention to the value of the stethoscope in noting the borborygmi characteristic in these cases of obstruction. Another important symptom to look for is irregular puffing of the abdomen without rigidity. The only thing to do in the way of relief is a colotomy (preferably anterior) when symptoms become urgent. Following this operation, the technique of which Dr. Ross described, patients may live for a considerable time, if by careful dieting they maintain a certain amount of constipation of the bowel. A suitable pad and truss are essential. Dr. Ross pointed out the great relief that often comes to the patient immediately the secondary operation of opening the bowel is performed.

The second patient shown had undergone laparotomy for pus

tubes—both ovaries and tubes being removed. The abscess of the left ovary had perforated into the bowel. The bowel perforation was closed, but owing to the amount of diseased tissue the result was not satisfactory. Gauze packing was used, and served to protect the peritoneum from the contents of the bowel which subsequently escaped through the wound. A hernia followed, and necessitated a subsequent operation. Dr. Ross cited a number of cases which showed how inconvenient and often distressing such herniæ are. In the repair of these imperfect abdominal walls, Dr. Ross cited his experience with various suture materials. Cat-gut, he found, would not hold the parts long enough together. Silk proved an irritant, often given trouble for years. Then silkworm gut was tried, tying it so that it could be untied and slipped out a few weeks later. This, however, proved unsatisfactory, too. Dr. Ross finally resorted to the use of silver wire, which he finds eminently satisfactory.

The third patient exhibited had suffered from an ovarian abscess on the right side, complicating appendicitis. The diseased abscess was opened and the appendix found fastened to the abscess cavity. The ovary and tube on the left side were normal.

The next patient was a sufferer from pyelo-nephritis, complicating pregnancy. Dr. Ross had had a number of such cases, though such cases are rare in obstetrical literature. This was a condition which justified the production of a miscarriage. The patient had had a child three years ago, and progressed favorably until about a month before coming into the hospital, when she had an attack of influenza. She complained of pain in the left side of the abdomen, extending over the left kidney, sharp and stabbing in character. A severe chill ensued and a rise in the temperature. Urine showed albumen and pus. The condition, however, has cleared up temporarily without interference. The abscess is supposed to be caused by pressure on the ureter. It is quite distinct from eclampsia. After delivery they go on very well. Patient still under observation.

Dr. Ross presented a slide, showing a section of a sarcoma of the ovary. He also showed the gross specimen of endotheliomata of the peritoneum. The history of these cases was cited briefly and the pathology outlined.

School Hygiene

MEDICAL INSPECTION OF SCHOOLS.

The last meeting of the State Medicine Section of the Academy of Medicine (Toronto), was devoted to the subject of the Medical Inspection of Schools, among the names on the programme being Dr. Hastings, Dr. Goldie, Dr. MacCallum and Dr. MacMurchy. Almost every member present took part in the discussion, and a good many new facts were elicited, for example, cases of trachoma among children exist in Toronto at the present time.

SCHOOL HYGIENE IN GREAT BRITIAN.

The Medical Officer of Schools, like many other great reforms, has come so suddenly at the last that great activity is being displayed by the community in getting the educational house in order for the change. The following regulations, adopted by the Edinburgh School Board, in 1906, have worked admirably and have been a help to other Boards:

Regulations for the Medical Officer of Schools.

1. He shall advise the Board as to new sites, plans of new Schools, and also, when required, as to School apparatus; he shall exercise a general supervision over the ventilation, heating, lighting, and cleanliness of the Schools; he shall periodically inspect all School lavatories and other sanitary installations, and he shall report immediately to the Head-master, and, if necessary, to the Superintendent of Works, any insanitary conditions discovered.

2. On receiving intimation of an outbreak of infectious disease among the pupils attending any School, he shall at once inquire into the outbreak; he shall take such action as may be immediately necessary, and he shall, as soon as practicable, report the result of this inquiry to the Board, and to the Medical Officer of Health for the city, and shall co-operate with him in any measures he may propose for the prevention of infection.

3. He shall advise the Board as to the necessity for periodic

disinfection and cleansing of the Schools, with a view to the prevention of disease.

4. He shall make such examination as the Board may require as to the mental and physical condition of children selected for Special Schools or Classes, and shall grant any necessary certificates.

5. He shall medically superintend all Special Schools and Classes; he shall keep the Board informed of the mental and physical progress of the children, and he shall indicate any measures that may be advisable for the preservation or promotion of their health.

6. On receiving intimation from the Chief Attendance Officer that a child is absent from school on account of an alleged illness, he shall, where a medical certificate is not produced, inquire into the case and report to the Board.

7. He shall advise the Board as to the children remitted to any Day Industrial School and shall make such medical examinations and reports as may be required.

8. To the extent and in the form prescribed from time to time by the Board, he shall medically examine the pupils attending the schools and shall preserve and maintain on approved schedules a record of the examination of each child.

9. He shall organize and superintend such systematic measurements and observations as the Board shall institute or approve,—for example, measurements of height and weight, improvement or deterioration of physique, and the like.

10. He shall from time to time inspect the physical exercises given in the schools, and shall report to the Board any practices that he considers injurious to individual pupils.

11. If any child is specially reported to him by the Head-Teacher as suffering from any ailment or defect or injury, he shall as soon as possible examine the child and give such directions as may be necessary.

12. When required, he shall medically examine candidates appointed to positions under the Board, Junior Students and Intending Junior Students, and report in cases of employees absent owing to illness.

13. He shall, after such examination as he may find necessary, certify the fitness of teachers or pupils to undergo special courses of Physical Training.

14. He shall, by lecture, demonstration or otherwise, instruct the teachers in the methods of recognizing the common ailments and defects of school children; in the practice of first aid for school accidents; in the general hygiene of the school and class-room, and in the physiological principles that underlie physical training.

15. He shall keep such records and books as the Board may

prescribe or approve; he shall submit an Annual Report on the work done, and he shall make such special reports as the Board may require.

16. He shall perform any other medical duties that may be, from time to time, required by the Board; but medical or surgical treatment shall be no part of the Medical Officer's duty.

EXAMINATION IN HYGIENE IN ITS BEARING ON SCHOOL LIFE.

The Royal Sanitary Institute, which is usually regarded as the chief sanitary authority in the British Empire, has established an examination in the above subject and extended its operation to every part of the Empire. During the year examinations have been held in Bloomfontein, Cape Town, Hong Kong and Sydney, N.S.W. Arrangements have been made to hold an examination in Montreal, and the following board of representatives has been appointed for the Province of Ontario:

C. A. Hodgetts, M.D., C.M., Secretary, Provincial Board of Health, and Registrar-General of Ontario, Toronto.

Willis Chipman, B.A., Sc., Consulting Sanitary Engineer, Toronto.

Charles Sheard, M.D., Professor of Preventive Medicine, Toronto University, and Medical Officer of Health, Toronto.

P. Bryce, M.A., M.B., Medical Officer to Department of Interior, Ottawa.

F. Montizambert, M.D., F.R.C.S.E., Director-General of Public Health, Ottawa.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

There can be but little doubt that the passage of the Medical Inspection of School Children Law by the British Parliament last year was, as the London correspondent of *The Dietetic and Hygienic Gazette* (New York) points out, "the great event of the past year in public health, as far as England is concerned." But the profession and the public are agreed that the benefits to be derived from the medical inspection of school children should be very great, but it remains to be proved what will be the best way of carrying it out. In England the Board of Education (a department of the Government) has appointed two eminent medical men, Dr. Newman and Dr. Eichholtz, as its chief medical advisers, and apparently intends to assume control of the matter, to some

extent at least. Reasons for this procedure will readily present themselves, but it remains true that the Medical Health Officer for the city, town, village, or county where the school is situated should be in the closest touch with the School Medical Officer. In many districts, there is no difficulty, all parties being more anxious to serve the common good than to stand on their own dignity and rights. It would not be a difficult matter for the Medical Health Officer to furnish the Board of Education with nominations for the position of School Medical Officer, and for the latter to take rank as assistants to the Medical Health Officer. A memorandum published in the *British Medical Journal* by the Medico-Political Committee of the British Medical Association, advised that the remuneration for medical inspection of school children should be at the rate of £50 per annum for attendance on one-half a school day a week, half a school day being defined as two hours; that is, the rate of remuneration would be about 12s. an hour. This is an important matter for the profession to consider, and the pronouncement of the Medico-Political Committee is both opportune and valuable.

Meantime, it is interesting to know that Chicago, a city which discontinued Medical School Inspection for a short time, has re-established it with the good-will of everybody, being persuaded thereto by a series of epidemics of scarlet fever last year. The Medical School Inspectors are appointed after passing a Civil Service examination held under the auspices of the Chicago Health Department. Each inspector is assigned to a certain district, containing usually from three to five schools, with a school population of three or four thousand. The doctor goes each morning to the office of the school principal and there examines all children who have been absent four days or more from any cause, and any who are suspected of having contagious disease. In addition, the Medical School Inspectors must see that all the children are properly vaccinated, doing the vaccination themselves if necessary. They, further, have charge of all cases of contagious disease in their several districts, investigating each case that is reported to the Health Department, and seeing that the proper quarantine regulations are observed. Among the recently appointed medical school inspectors in Chicago is a Canadian, Dr. Margaret Rogers Riley.

H. MACM.

Proceedings of Societies.

EIGHTH ANNUAL MEETING OF THE CANADIAN ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

The eighth annual meeting of the Canadian Association for the Prevention of Consumption and other forms of Tuberculosis was held, pursuant to announcement, in the Railway Committee Room of the House of Commons, on Wednesday and Thursday, March 18th and 19th.

Notwithstanding that it was understood to be rather a formal business meeting than a convention there was a good attendance. The programme was sufficiently full, and the discussions were interesting and to the point.

The chief matters of interest were the report of the Executive Council for the year just closed, together with the reports of Branch Associations from nearly all the Provinces.

The report of the Executive Council of the Association emphasized the importance of the medical inspection of schools and of school children as a means of promoting the vigorous development of the rising generation, and, therefore, as one of the best possible measures of prevention of consumption.

It might have been expected that this particular form of prevention would have found favor chiefly in cities like Montreal and Toronto, but the progressive communities of the west show themselves alert to adopt a proposal that is so clearly in the interest of the entire community as the regular and systematic medical inspection of school children by qualified practitioners.

Pincher Creek, Alberta, claims the honor of being the first school district in the Dominion of Canada to adopt this beneficient measure. And other school districts in the same Province have the matter under advisement.

Montreal has had sufficient experience of the system to be able to testify to the benefits of medical inspection. Dr. Laberge, the Chief of the Staff of Medical Inspectors of Montreal, notes a falling off of about 50 per cent. in the usual number of cases of infectious diseases reported to the health officer, and attributes this improvement very largely to the increased cleanliness of the pupils, the better ventilation of the schools, and the prompt checking of the spread of contagious diseases, as the result of the frequent inspection of the children. The total cost in Montreal has been an average of 20 cents per school child for the year.

In Hamilton, where medical inspection of the schools and of school children has now been in operation for a year, the results have proved eminently satisfactory.

No better illustration of the value of this inspection can well be given than is found in a note appended to the report of Dr. Roberts, the Medical Health Officer of Hamilton. Among other things his first monthly report showed that 113 children were found to be suffering from defective vision. Before the time for the next report came it was found that 70 of these suffering children, whose ailments had been unsuspected, had been taken to a specialist and the defect remedied.

Last year the Association brought this subject to the notice of every inspector, every school teacher, and every school trustee whose name and address could be ascertained, and it is certainly gratifying to know that the effort of the Association has met with such an appreciative reception and is already bringing forth fruit which must redound to the permanent welfare of the county.

Among the most gratifying reports from Branch Associations were those from British Columbia, from Hamilton, Ont., and from the County of Colchester, Nova Scotia.

In British Columbia a property known as The Tranquille ranch was purchased, and the buildings, which admitted of easy adjustment to the new uses to which they were destined, were put in order and the institution was formally opened on the 28th of November last, by the admission of 10 patients.

Beauty of situation, salubrity of climate, quality of soil, and the fine southern exposure, with abundant forest protection from winds, make this an ideal location for a Sanatorium. This institution will always be a monument to the humanity and public spirit of Dr. Fagan, the Medical Officer of Health of British Columbia, who is to be congratulated on the successful accomplishment of his plans for the relief of the consumptive sufferers of the Province.

The proposed Sanatorium for the Province of Manitoba is soon to become an accomplished fact. A beautiful and in every way desirable location has been secured at Minette, and building operations will be begun this spring. The undertaking lost a warm advocate and laborious friend by the untimely death of Dr. McInnis, but there is every reason to hope that a successor will be found who will carry Dr. McInnis' plans for the relief of suffering men and women to a prosperous conclusion.

There is no city in the Dominion which has so complete and so scientific an outfit for the crusade against consumption as Hamilton, Ont.

This distinction the city owes to the energy, public spirit and generosity of her own citizens. Time does not permit us to trace, step by step, the process of historical development by which the

tent used by Mr. J. H. McMenemy, the City Relief Officer, has grown into the Sanatorium on the Mountain—the Relief Home for advanced cases on the hospital grounds in the city. It is enough to say that the people of all classes co-operated to bring about this magnificent result, which every lover of his kind can only wish may be the means of stirring up other cities and municipalities to follow the example so handsomely set by Hamilton.

The report of the Colchester County Association shows what can be done in the way of fighting consumption in a rural district. Too commonly it has been taken for granted that measures for the repression of consumption can only be successfully carried out in centres of at least fairly large aggregates of population.

In Colchester County the Society has enlisted the sympathy and co-operation not only of the doctors, clergy and benevolent people of old shades of opinion, but also of the County Council.

At the January Session, 1908, of the Colchester Municipal Council, besides reaffirming a grant of $100 to aid patients from this county attending the Sanatorium at Kentville, the following resolutions were passed:

1. That the sum of $50 be, and the same is herewith ordered to be placed at the disposal of the Treasurer of the Colchester Association for the prevention of tuberculosis.

2. That the sum of $100 be appropriated to pay the services of a district nurse, who may from time to time give practical instruction in the nursing of advanced cases of consumption.

3. That the Municipal Clerk be instructed to advise the Council of Public Instruction that in the opinion of the Colchester Municipal Council, New Health Readers, which would give fitting notice to the Prevention of Consumption should be provided for the public schools.

During the past year fully 200,000 pages of reading matter have been distributed over Colchester County. The literature was not distributed blindly or at random, but was sent to selected readers, persons of character and influence in their own neighborhood who can be counted on to bring the information within the reach of others.

It is not necessary to quote further from this admirable report. Enough has been given to illustrate the temper and methods of our people down by the sea.

The question of effective inspection of milk and meat, which had in former years received careful attention at the hands of the Association, was again considered. The conclusions reached may, perhaps, be summed up with sufficient accuracy in the words of a report made to the Annual Meeting in 1902, viz.—On the question of guarding against the spread of tuberculosis through food supplies, your Committee begs to recommend that the Dominion Government be asked to continue and increase dissemination of

information on the danger of the spread of tuberculosis by means of infected milk and meat, and that such information should specially refer to the need of keeping the byres and cattle supplying milk in a healthy and cleanly state. Municipal authorities should further extend their inspection of milk foods and their sources, and provide for periodical inspection of cattle and stables; and that all meat sold within any municipality or prepared therein should be subject to inspection.

It was shown that the trend of opinion among medical men is in the direction of laying increased, rather than diminished, emphasis upon the need of care to preserve infants from infection during the period of life when cows' milk must be their chief sustenance.

The deputation appointed by the Annual Meeting of 1907 to wait upon the Honorable the Minister of the Interior, to lay before him the views of the Association, to the effect: that it is desirable to prevent, as far as possible, by thorough inspection, the entrance of tuberculous immigrants into Canada, or should any such escape detection at ports of entry, by having them returned to the country from which they came.

The Hon. Frank Oliver, the Minister of the Interior, received the deputation, and, after hearing their representations, said in reply, that he was in sympathy with the object aimed at by the deputation, that an order had been issued to all inspectors at ports of entry requiring stricter inspection, and that the policy of the Government was to secure, as far as possible, the exclusion of undesirable immigrants, especially those suffering from disease or known to have a criminal record.

In 1902, the Association laid down the following propositions regarding the extent to which general hospitals should be auxilliary in stamping out tuberculosis:

I. Recognizing the fact that with the exercise of reasonable care pulmonary tuberculosis is non-contagious, and that consumption may be treated in a general hospital without in any way being a source of danger to others.

II. That many are unable to be cared for outside a general hospital;

III. That the function of a general hospital is to care for all classes not affected with dangerously contagious disease. The responses made by the hospital authorities who were written to regarding their practice touching the admission of consumptive patients show that the condition of these unhappy sufferers has become worse rather than better during the last six years. Then of thirty-four hospitals, twenty-one received and thirteen refused admittance; whereas now, 1908, of 46 hospitals heard from, only seventeen received consumptive patients, and twenty-nine refused admittance.

To find a remedy for this state of things, it was agreed (1) that an effort be made to furnish evidence in support of the position taken by the Association, such as may, when impartially considered, lead hospital boards to abandon their present policy of exclusion; (2) and that representations be made to the Provincial Governments, asking them to consider the facts set out by the Association and to make it compulsory upon hospitals receiving public money to make reasonable provision for consumptives.

The report of the Executive Council dealt pretty fully with the efforts made by the Dominion Government to stay the plague among the Indians; commended the good beginning which had been made in the use of tent sanatoria, managed by trained nurses under the direction of the doctor appointed for the district; and urged the extension of the work as rapidly as suitable persons to be entrusted with it can be found.

In the way of circulation of literature, this last year has been by far the best in the history of the Association, there having been more than 2 1-2 millions of pages distributed in various parts of the Dominion. During the summer of 1907 the chief cities and towns of Manitoba and North Eastern Saskatchewan were visited by the Secretary, whose lectures helped to create and to confirm the public feeling in favor of the establishment of sanatoria for these Provinces.

And finally, on the invitation of the Mayor and City Council of Hamilton, it was agreed to hold the next Annual Meeting in that city, at such time as may be found to be most convenient for all concerned.

The meeting throughout was pervaded by an earnest spirit; the discussions were admirably conducted, and the general results highly satisfactory. Altogether, this meeting, though not the largest, was one of the best yet held.

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Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Associate Demonstrator of Pathology Toronto University; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology—J. M. MACCALLUM, M.D., Toronto, Professor of Materia Medica Toronto University; Senior Assistant Eye Department Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear—PERRY G. GOLDSMITH, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department Toronto General Hospital.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifth of the preceding month. London, Eng. Representative, W. Hamilton Miln, Thanet House, 231 Strand, W.C. Agents for Germany, Saarbach's News Exchange, Mainz, Germany.

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Editorials.

SHOULD OSTEOPATHS BE ALLOWED TO PRACTISE?

THE current of authority in New York State seems favorable to restricting the performance of any act tending to cure or affect human disease to persons who are legally qualified to practise medicine. A decision given by the New York Supreme Court in People *vs.* Allcut, makes this point clear. In that case, Allcut, who was not registered, represented himself by sign and card to be

a physician, he prescribed no drugs, but diagnosed the ailments of his patients, prescribed diet, and remedies, gave treatment by manipulation, professing to cure without drugs diseases that other physicians cured with drugs, and to cure other diseases that they could not cure.

In holding the defendant guilty of practising medicine, without being lawfully authorized and registered, the Court laid particular stress upon the fact that Allcut attempted to diagnose, and the Court took occasion to say that to confine the definition of the words "practice of medicine" to the mere administration of drugs or the use of surgical instruments would be to eliminate the very cornerstone of successful medical practice, namely, "the diagnosis." In the opinion of the Court, diagnosis seems to be an integral part of both the study and practice of medicine, and is so recognized by the Law, as well as common sense. In support of its decision the Court referred to the fact that the Courts of Massachusetts, Maine, Michigan, Iowa, Missouri, Colorado, Nebraska, Illinois, Ohio, Alabama, Indiana, New Mexico, South Dakota and Tennessee have refused to restrict "practice of medicine" to the administration of drugs or the use of surgical instruments.

After reading the summary of the decision of the New York Supreme Court, in the above case, one can only feel chagrin at a decision given, April 3, 1908, in a case brought by the New Brunswick Council of Physicians and Surgeons against Dr. H. L. Spangler, osteopathist, charging that his practice is a violation of the Medical Act. Several citizens of St. John testified to being treated by Dr. Spangler. Dr. Spangler won and the case was dismissed. Judge Ritchie, in summing up, said: "As regards the matter of diagnosis, I am not sure it was necessary that we should know whether or not Dr. Spangler knew what was wrong with the patients. The question is: What is the law, and did he violate it? I am of the opinion that the treatment of these witnesses, as given in their testimony, by manipulation, or the laying on of hands, does not constitute the practice of physic, surgery or midwifery, and the prosecution has failed to make a case. The defendant will be discharged."

The Council of Physicians and Surgeons of New Brunswick ought to ask for amendments to the Medical Act of that Province. A modern physician should not be limited in the choice of agencies

for the cure of disease. The interpretation given to the New Brunswick Medical Act, according to which it was decided that Dr. Spangler was not practising medicine, because he used manipulation, instead of prescribing drugs, shows that the limitations of that Act are inimical to scientific medicine. Of what importance is it that a physician uses drugs, baths, electrical apparatus, massage or any physical agent in his practice? None whatever, unless he employs agents capable of alleviating or curing disease. The choice of a curative agent presupposes diagnosis—an intelligent appreciation of the etiology of the disease which requires treatment. To restrict a modern physician to the pharmacopœia is absurd. J. J. C.

MUSCLE AND MIND.

In the January, 1908, number of *The Medical Standard* (Chicago), the editor quotes approvingly the following excerpt from Mrs. Eddy's *Science and Health*: "The motion of the arm is no more dependent on the direction of the mind than are the organic actions and secretions of the viscera. . . . The valves of the heart, opening and closing for the passage of blood, obey the mandate of mind, as directly as does the hand moved evidently by the will, though physiology admits the mental causation of the latter, but not of the former."

Ordinarily one does not know that one has a heart. Hard work or strong emotion act on the nerves of the heart increasing the rapidity of its action. Fright, caused by bad news, shock from a fractured femur, weaken the action of the heart.

This is not all, for the distress of mind and alarm felt by the patient appear on his face; he looks pale and may faint. To contend that these disordered states of the heart and other viscera are the results of mind, just as much as the voluntary raising of the patient's arm, is confusing. The symptoms of shock in either case are an involuntary revelation of the sympathy of the whole body with the injured feelings or the fractured femur, expressed through the nervous system. The mind does not direct the effort in shock; it may regret, if conscious, the circumstances which produce shock, but, being overcome by a superior force, yields its controlling power over bodily function, however unwillingly.

The valves of the heart begin to work before one is conscious of having a mind and continue, without mental direction, till death. One may move at will, a sound, unfettered limb, because the muscles, nerves and nerve centres are healthy and under the complete control of the will. Were a blood vessel in the brain to burst, hemiplegia would follow, and even after consciousness had returned, one would be unable to lift a finger of the paralyzed hand. The strongest mental efforts cannot make a drop of bile flow into the duodenum, or stop the flow of urine through either ureter. Fortunately for one's well-being these visceral functions are involuntary.

Another excerpt from *Science and Health* quoted in the editorial is as follows: "Because the muscles of a blacksmith's arm are strongly developed, it does not follow that exercise has produced this result, or that a less used arm must be weak. If matter were the cause of action and muscles without the co-operation of mind, could lift the hammer and strike the nail, it might be thought that hammering would enlarge the muscle. The trip hammer is not increased in size by exercise, because mind is not producing that result in the hammer." The last observation in this quotation is particularly futile, because the authoress is discussing the attributes of living organs, and not of dead metals. Exercise does develop and hypertrophy muscles, owing to a relatively large blood supply directed to the exercised parts. Some years ago we examined an athlete whose history showed that from being a delicate boy he had, by gymnastic exercises, developed his muscles to an extraordinary degree of efficiency and bulk. A weak man, one with a strong mind, would be no better than a child in the grasp of this man whose upper arm, when flexed, measured nineteen inches in circumference. It goes without saying, but it is no harm to say it here, that strength of muscle and force of will go together in the production of the most forceful muscular efforts. In the news from Central Africa, it was reported recently, that a lioness dragged a man through the window of a construction car and afterwards carried him off into the jungle. Could the hunger-directed muscular effort of this lioness be called an effect of mind on matter?

Hunger is a strong spur to muscular effort; so is hate, rage, sexual desire. All animals, man included, are influenced by emotions, under the influence of which they perform feats of strength

and endurance that are amazing. Yet it is, nevertheless, true, that a weak man, with the strongest effort of mind, cannot swing a twelve-pound hammer like a trained blacksmith doing his day's work, and an unarmed man is powerless in the clutches of a lioness.

Again, one may be so exhausted as to be scarcely able to drag one foot after another; but, if threatened with sudden death, one may rise and escape the danger by making an extraordinary effort. Is this result due to the influence of mind over muscle? In Kirke's Physiology the explanation of the phenomenon is as follows: "Under normal circumstances, muscles do not become completely fatigued, for the reason that the nerve cells which send out the impulses for contraction become fatigued sooner than the muscles themselves do. Nerve cells, however, recover from fatigue more quickly than muscles."

To fully answer these questions, one must first define what is meant by "mind." J. J. C.

THE "MORAL HAZARD" IN ACCIDENT INSURANCE.

In an address read before the Insurance Institute, of Toronto, last March, Dr. J. E. Elliott states that a few physicians "have wilfully and intentionally prostituted their profession in the interest of their patients." Prostitution is a very strong word, and the only evidence to substantiate it in this connection is that a doctor, who had seen a patient (an insured man) for cholera morbus, an illness not included in the list of diseases mentioned in the policy, obligingly placed the claim under one of the diseases which was mentioned in the policy.

Dr. Elliott does not allude to the "moral hazard" of the doctor of the Accident Insurance Company. As the manager of one of these companies put it to us lately, the medical officer of the company is in a position of defence, ready to treat as a rogue every claimant not proven to be honest. Sometimes, perhaps, with the best of intentions, he reports against a just claim. We know of an instance in which the medical officer of a Toronto Accident Company, passing over the reports of two practitioners, without making any clinical examination of the patient himself, refused to accept a diagnosis of traumatic neuritis of the anterior crural

nerve. This medical officer reported the case as one of muscular rheumatism and the accident claim was rejected by the Company.

Dr. Elliott suggests that, as a means of having control over the ailments and accidents of the insured, "One medical man should be appointed in each of the larger agencies that would warrant it, who would be independent of any one company, but rather the representative of the whole, and who would keep in touch with the claimant from the beginning of his disability to the end."

If the competing companies would only agree to choose such a referee, it would certainly be a good thing for the lucky doctor who would get the plum. If he were a thoroughly competent man, one of wide culture, not biased, diplomatic, shrewd to detect malingering, but able to tell the difference between simple neuritis and myalgia, he would help to strengthen the cause of accident insurance among a doubting people.

As accident insurance is now very much in demand, physicians, whether as the attendants of claimants or the medical officers of companies, should be scrupulously exact in the diagnosis of the injuries or diseases of claimants. J. J. C.

EDITORIAL NOTES.

The Domestic Fly as an Agent in Spreading Typhoid Fever.—The official report of Dr. V. C. Vaughan, State University of Michigan, after a study of typhoid fever occurring among American soldiers in camps during the summer of 1898, shows conclusively the agency of flies as an etiological factor of typhoid fever. A collective examination made by the American Department of Agriculture (L. O. Howard, Entomologist), in 1899, showed that of all flies caught in rooms, where food was exposed, 98.8 per cent. were house flies. The house fly deposits eggs, as a rule, on horse manure, but may lay eggs on human feces. The egg of the house fly hatches in from 8 to 12 hours. The larva lives usually 5 days, and the pupa 5 days, thus making about 11 days for the entire cycle of development in warm weather. Between 120 and 160 eggs are usually laid by a single female. Experiments made with cow manure and decayed fruit at the Department of Agriculture, Washington, failed. The flies either did not oviposit in these substances or the maggots died. Horse manure

should be frequently removed from the vicinity of human dwellings. While kept in the stable it should be boxed up and covered with chloride of lime, which kills the maggots, but does not spoil the manure for fertilizing purposes. Box privies should be abolished, and, when water closets are not available, earth closets should be used. Human feces should be covered with earth, wood ashes or chloride of lime. Flies should be excluded from foodstuffs, by screening the doors and windows of stores, store-houses, dining-rooms and kitchens, where food is exposed. The same regulations can be applied to bar-rooms and soda fountains, except those in the open air. Even here protection could be secured by means of mosquito-gauze booths. Sputum and feces should be disinfected at once. Open wounds should be protected by bandages, or by a gauze screen over the patient if he be in bed.

Bulletin No. 146 (Laboratory of the Inland Revenue Department, Ottawa), Bismuth Subnitrate, Potassium Bromide, Phenacetin.—In bulletin No. 146, Mr. A. McGill, chief analyst, reports upon 196 samples of drugs collected last December, and consisting of the following:

Bismuth Subnitrate	55 samples
Potassium bromide	57 "
Phenacetin	84 "
Total	196 "

These were obtained in each of the (14) inspectoral districts of the Dominion, and doubtless represent, very fairly, the character of the drugs named, as sold throughout Canada. The report says: "The percentage of bismuth has been determined by conversion to the oxide. Tests for lead, arsenic and carbonic acid have been carefully made. With the exception of two samples in which the oxy-carbonate of bismuth had been dispensed, instead of the subnitrate of bismuth, the requirements of the British Pharmacopœia were fully met. These two preparations are so similar in their medicinal value that the error is not a serious one. The 53 samples of potassium bromide were found to be satisfactory. The British Pharmacopœia describes this drug as required to be within one per cent. of chemical purity, and to contain no trace of the heavy metals, or of cyanides. Six samples of phenacetin from each inspectoral district were examined, as regards specific identity and

absence of acetanilid and paraphenitidin. All were found to be of the requisite purity."

Orphanages in Ontario.—Dr. P. W. Bruce-Smith, inspector of Hospitals, in his last report, December 2, 1907, deplores the increase in the number of inmates in the Ontario orphanages. He says: "The best institution is a poor substitute for a home. The Children's Aid Societies throughout Ontario have more applications for children for adoption than can be supplied; and it seems peculiar that so many children should be kept in orphanages, who might be adopted into comfortable homes. The fault lies, I am convinced, not nearly so much with the people in charge of our orphanages as with persons who commit children to these institutions with the expresed understanding that they must be kept there and not given out for adoption into private homes. I have expressed the opinion that the rules governing the admission of all inmates should be changed, so as to permit the management of all our orphanages, after a child has remained a certain period, to decide in regard to his removal for adoption." If a child is deprived of one parent, the surviving parent may be expected to re-establish the home and remove the child from the orphanage. This is as it should be. Orphanages are, unfortunately, necessary; but they should be used only during periods of storm and stress; the orphaned child should be restored, as soon as possible, to a home by the surviving parent. If the surviving parent is morally unfit to take charge of a child, if no relatives are willing to take the place of parents, then the child should be given to a strange family for adoption.

Bulletin No. 162.—Breakfast Foods, Their Chemical Composition, Digestibility and Cost.—We have been much pleased with a study of this bulletin, the work of teachers in the Ontario Agricultural College, Guelph, and issued by the Ontario Department of Agriculture. The bulletin shows *inter alia* that the uncooked oat, wheat and corn meals are among the most economical sources of nutriment and energy, and that probably oatmeal ranks highest among them. Compared with them the advertised foods are expensive. "The reason that prepared breakfast foods are more expensive is not because they contain any more nourishment, but because of the way they are prepared, the manner they are put

on the market, and the cost of advertising. A curious name or appearance, or a mysterious process of preparation does not give them the extraordinary food value sometimes claimed. They may have a place in a hurry-up breakfast; but, where economy is considered there is nothing in the composition, digestibility or palatability of these high-priced, predigested foods to justify the extravagant price asked for some of them." All of which is true enough, but, in townlife, at least, people prefer the tasty, ready-to-serve breakfast foods to the old-time oatmeal porridge, wheaten grits, etc. Besides, when eating shredded wheat, one of the best of these foods, one has something to masticate instead of a soft mass, which slips down the esophagus, without preliminary chewing and insalivation. The public are certainly indebted to the manufacturers of the ready-to-serve breakfast foods for their skill in manufacture and the cleanliness and tastefulness of their output. Let us hope that the manufacturers of breakfast foods, while continuing to please the palates of the people, will earn their profit in lowered prices and larger sales.

Favorable Influence of Small Doses of Arsenic and Bichloride of Mercury in Graves' Disease.—Dr. L. Weber, New York, reports (*Medical Record*, Feb. 8th, 1908), the successful employment of arsenic and corrosive sublimate in Graves' disease for their antitoxic effects. He says: "The patient was ordered arsenic gr. 1-60, and corrosive sublimate gr. 1-60 in tablet form, to be taken *t.i.d.*, and about one month after the introduction of these remedies she showed signs of improvement in all the symptoms. She continued to take the remedies with but little interruption for nearly three years, recovered entirely and has not been in need of any treatment for the last two years. In two other cases which have come under my care since 1903, I have had equally good results from the same remedies; however, they were not severe. I shall be gratified, if this short communication will induce other practitioners to try the treatment in suitable cases. Medical treatment should, of course, be adopted before surgical interference is tried in exophthalmic goiter. Dr. E. Lanphear says (*Surgical Therapeutics*), medicinal treatment may be combined with the use of the X-ray (Mayo), or with the administration of milk or serum from thyroidectomized goats, sheep, etc. (Lanz and Moebius). This method of treatment should not be

continued too long, unless operative treatment is contraindicated, since the disease itself tends to reduce vital resistance and to exhaust the nerve centers." It should not be forgotten that, like other goiters, the bronchocele of Graves' disease is often benefited by the local use of decolorized iodine. J. J. C.

PERSONAL.

Dr. L. F. Barker, Professor of Medicine in Johns Hopkins University, Baltimore, and formerly of the University of Toronto, was honored by Queen's University, Kingston, on April 29th, by having conferred on him the honorary degree of Doctor of Laws.

News of the Month.

DEATH OF DR. J. W. PEAKER.

The well-known physician of 347 Bathurst Street, who has been ill since last November, passed away on Sunday night, April 5th, aged 43 years. Five weeks ago Dr. Peaker was stricken with paralysis, and he had gradually sank until his death occurred. Deceased was a graduate of the Toronto Medical School and afterwards took a post-graduate course in England. Dr. Peaker was a son of Mr. William Peaker, a well-known business man of Brampton. A widow and one child survive. Drs. E. and K. Peaker, dentists, of Parkdale, are brothers of deceased. The late Dr. Peaker was a member of Zetland Masonic Lodge and the Knights of Pythias, and was an adherent of Broadway Methodist Tabernacle.

PRESENTATION OF PORTRAIT TO WALTER B. GEIKIE, M.D., C.M., D.C.L., LL.D.

As a testimonial of the great work of Dr. Walter B. Geikie, formerly Dean of Trinity Medical College, in advancing medical education in the Province and in founding and building up Trinity Medical College, which has sent forth so many graduates, who have highly distinguished themselves in their profession, his life size portrait in oil was unveiled before the Academy of Medicine, on Tuesday evening, April 7th, in the presence of a large number of Fellows of the Academy and friends. The picture was accepted by Dr. Geikie and presented by him to the Academy of Medicine.

Dr. George A. Bingham made the presentation on behalf of the graduates of Trinity Medical College. In his address he referred to the fifty-one years of service of Dr. Geikie in the teaching of medicine. He began his career in 1856, and from that year to 1860 Dr. Geikie filled two chairs of the medical faculty of Victoria University. His health then broke down and he removed to Aurora. While there he attended to a large practice and came in to the city to deliver his lectures. In 1869 he was appointed to the chair of Medicine and Clinical Medicine of Victoria University. In 1870, Dr. Rolph, Dean of the Medical Faculty of that

institution resigned on a matter of principle and Dr. Geikie left with him, founding Trinity Medical College, in 1871, where he was Professor of Medicine and Clinical Medicine. In 1878, Dr. Geikie became Dean of Trinity Medical College, and this position he occupied till June, 1903. Until 1907 Dr. Geikie was examiner in medicine for Trinity University.

Dr. Geikie, replying to the presentation to him of the portrait, spoke as follows:

To the President and Fellows of the Academy of Medicine, Toronto.

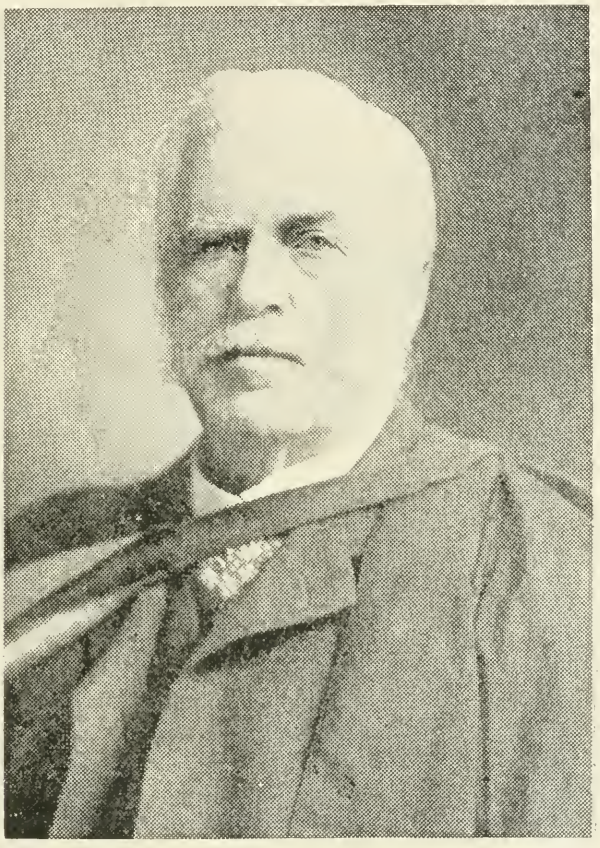
Gentlemen,—I accept with much pleasure the portrait just presented to me by Dr. Bingham, on behalf of the Graduates of Trinity Medical College, in such kind and pleasing terms, representing the more than warm feelings entertained towards me personally, by the Graduates of my old College. Fifty-one of the best years of my life were spent as an earnest medical educationist. Thirty-two of these, from April, 1871, until June, 1903, were specially devoted to the founding—establishing on as firm a foundation as possible—and building up, of Trinity Medical College, with all the energy I possessed, ever keeping in view, and promoting, as far as was in my power, the best interests of every student who entered the College during that long period.

I therefore appreciate this presentation, coming from her graduates, very highly. It vividly recalls many past and most pleasant years—years to me of continuous delight in daily meeting my classes. With all my heart I thank every graduate who has had a share in this presentation, who was as loyal to his College as I was, and who now cherishes as sincerely as I do her glorious memory.

I regard this presentation as a fresh and marked evidence that the hearts of our graduates continue to beat, as my own does, with mingled pleasure and pride, as we think of the magnificent work Trinity Medical College did for Practical Medical Education during the long and useful years of her existence. No wonder that my whole heart was given to promoting and stimulating so great and so grand a work. It is, however, and I think our graduates will all agree with me, very largely, perhaps chiefly, to commemorate the glorious and long-continued usefulness of our College, that this presentation is now made. The numerous high positions our graduates occupy where they are practising their profession, and the eminence attained by so many of them, in Canada and elsewhere, bear testimony stronger than any words of mine can do, to the excellence of the professional training they received within her walls. I may here mention as illustrative of the fact just stated, the well-known names of Professors Alex. H. Ferguson, of Chicago, Teskey and G. A. Bingham, of Toronto, who, with

many others, are eminent surgeons, and, did time permit, I could give the names of many who are distinguishing themselves in all the various branches of their profession in Canada and elsewhere.

It is not surprising, therefore, that with hardly an exception, they are as loyal to the memory of their College, and that her name is, and always will be, as dear to them as it is to me. Great and long continued as my work in connection with the College was,



WALTER B. GEIKIE M.D., C.M., D.C.M., LL.D.

the general success of her graduates has always been to me an inspiration and a joy.

In this connection I have only one regret, and one wish—the regret is, at my not having done more than I did for my College and for her students. The wish is, that what I did do had been done very much better.

A College like ours was worth the labor of many a life, as her teaching was a blessing to the men she taught,—a credit to our

city and country, and a boon to the public, who require and deserve to have the very best and most practically taught medical men we can produce, sent out, to practise their profession,—men who are capable of successfully coping with the frequent and great responsibilities so often met with at the bed-side.

Earnest medical teachers like to have students, who, in pursuing their studies, have an aim as high as this. To take such a stand requires men of at least average capacity, for it has to be kept up. This cannot be done by young men of the type of one of Charles Dickens' characters, who appeared to be physically and mentally more like "a swelled boy" than a fairly able young man. Good men are known by their steady and good work, maintained throughout their entire course. Thus, and thus only, can they acquire the good and full knowledge they require to have. And this is what is sure to tell in the long-run on the real success of a doctor.

A young man's capacity increases with regular and diligent study—and grows, as the body does, with his growth. A man may thus reach "brain-hood," a word I have just now coined, intended to denote a well developed and well furnished *brain*, as "manhood" denotes a well grown physical frame.

Cultured men of this kind, although now and then the grossly ignorant may pass them by to employ the illiterate, and untaught, will have, and retain the respect of all who know them, provided their characters are of the best, which is indispensable—and they will soon secure and retain the confidence of intelilgent people who are fortunate enough to call them in.

While to-night my remarks have necessarily referred to my own College and her graduates only, it goes without saying that I entertain no feelings other than those of kindness and sympathy towards all well-conducted medical colleges which now exist, or which may hereafter be established amongst us, and nothing pleases me better than to hear of their full success.

Gentlemen, I again thank you for the portrait, and have pleasure in presenting it to the Toronto Academy of Medicine.

Dr. Ross, President of the Academy of Medicine, expressed his thanks on behalf of the recipients of the portrait, for its presentation, especially as it was the picture of so prominent a medical educationist as Dr. Geikie.

The portrait is the work of Mr. J. W. L. Forster.

Dr. Meltzer, of New York, then delivered a technical address on "Shock and its Nature."

THE TORONTO DISPENSARY.

One of Toronto's oldest and most useful charities was established in the year 1854. It first saw light in a little frame building on the south side of Adelaide St., a few doors east of York St. The conveniences were very meagre, two small, poorly-lit and badly-ventilated rooms served as consulting rooms, and a small cupboard-like place at the end of the hall for a dispensing room. One general practitioner, Dr. C. B. Hall, comprised the staff. He was in practice on the corner of Adelaide and Sheppard Sts., and afterwards moved to Simcoe St., near Caer Howell St.

Among the medical men who have been faithful members of the staff from time to time are the names of many respected and eminent physicians and surgeons, such as the late Doctors Small, Hodder, Widmer, Geo. Wright, Richard Zimmerman, B. Spencer, F. Greenlees, L. MacFarlane, F. H. Wright, J. W. Lesslie, and many others.

Among those who have retired from the staff are Doctors W. W. Ogden, I. H. Cameron, F. LeM. Grasett, E. St. George Baldwin, A. E. Senkler, H. T. Machell, R. B. Nevitt, Adam Wright, A. McPhedran, Allen Baines, G. H. Burnham, W. Nattress, J. F. W. Ross, and others.

The minute-books show that from its inception up to nine years ago the dispensary had been managed by a committee of ladies, comprising members of some of Toronto's most prominent and philanthropic families. Mrs. Strachan and Mrs. Grasett (mother of Dr. F. LeM. Grasett) both acted as President of the Board for many years. Mrs. Price, Miss Muttlebury, Miss Gilmor, Mrs. Dredge, Mrs. Geo. Wright also helped in this good work.

In May, 1899, the ladies decided to relinquish the management, when the following members of the medical staff constituted themselves a Board of Management, viz., Drs. Alex. Davidson, President; J. F. Dawson, Secretary; the late J. W. Lesslie, Harley Smith, G. B. Smith, W. H. B. Aikens, W. J. Greig, A. H. Garratt, and W. H. Pepler.

Miss Emily Morrison, daughter of the late Angus Morrison, sometime Mayor of Toronto, who had acted as Treasurer on the Ladies' Board, kindly consented to continue in that important post under the new management.

About the year 1880, the Board found it necessary to procure a more adequate building, as the old one on Adelaide St. was in a most dilapidated condition, totally unfit for dispensary work; consequently the institution was removed to 133 Simcoe St., where it continued to carry on its beneficient work in a quiet and an

unostentatious way for 28 years. These premises in turn became unsuitable and in order to keep abreast of the times, necessity was felt of securing a well-equipped, commodious, and permanent building for the more satisfactory scientific treatment of the sick poor who were coming in steadily increasing numbers to their doors for relief. To this end the present site and building was purchased in June, 1906; it was remodelled according to the latest approved plans of Continental and American dispensaries, and equipped with all modern appliances, instruments, etc., for the thorough treatment of medical and surgical diseases.

A reference to the medical report for the year 1877 elicits these interesting facts and figures: There were about 4,000 new patients, and over 6,000 old ones who returned to have their medicines renewed; 1,240 visits made by the staff to the sick poor who were unable to attend the dispensary; also a number of lying-in cases were attended through the dispensary during the year.

In 1901, between 16,000 and 17,000 applicants came to the dispensary for relief, and the number has been steadily growing since, representing all types of disease, every nationality and religious denomination and age, generally people in the most destitute circumstances. They came from all parts of the city and often from beyond the city limits. During the past winter, with its financial stringency, scarcity of labor and increased emigration, the dispensary has been taxed to its utmost.

The institution is supported by voluntary contributions, a small city grant, and a charge of five cents, if the patient can afford it. This charge was instituted in the year 1878, in order to partially defray the expenses of the medicines. Many donations in money, apparatus and furnishings have been kindly given by business firms and private citizens towards the completion of the present home of the dispensary. The T. Eaton Co., J. F. Hartz Co., and J. Stevens & Son Co., amongst others, have been especially liberal. The late Dr. J. W. Lesslie, who faithfully served on the active staff for many years, and was ever a true friend of the institution, left $200.00 to be applied on the building fund and towards permanent apparatus. A handsome brass tablet has been erected in the dispensary by the Board of Management in memory of the late much-lamented Dr. Lesslie.

The Dispensary is open every week-day at the noon-hour, this hour was wisely chosen by the founders of the institution with the object of enabling the poor working-class to get treatment without losing time from their work. At the noon-hour each day two consultants are present, when all general diseases are treated. In addition to this, certain days are set apart for special work, as eye, nose, throat and ear, diseases of women, skin, children's diseases, diseases of the digestive system, nervous system, and diseases

of the chest. All these sections are largely attended, most interesting and varied are the conditions presented from day to day.

Two nurses from the Beverley St. Nursing Mission, whose services are given gratuitously, are in attendance daily, and are of considerable assistance to the staff in preparing patients,

dressings, etc. A limited number of tickets are issued to students at the rate of $5 annually. They are appointed clinical clerks and dressers to the various physicians and surgeons, and thereby receive considerable practice in examination of patients, writing prescriptions, dressing of minor wounds, bandaging, etc.; the opportunity is afforded them of attending a number of obstetric cases, under the supervision of one of the

staff. A large number of students have benefited by this most practical course in the past, and have expressed their thorough appreciation of it.

Below is a full list of the active and reserve staff:

Physicians and Surgeons. Active Staff.—Doctors Alex. Davidson, G. B. Smith, F. Dawson, W. H. B. Aikens, W. J. Greig, W. H. Pepler, A. H. Garratt, Harley Smith, F. A. Clarkson, Joseph Graham.

Special Departments.—A. H. Garratt, gynecology; W. J. Greig, pediatrics; W. H. B. Aikens, dermatology; W. H. Pepler, digestive system; Goldwin Howland, neurologist; Colin Campbell, oculist; Gilbert Royce, nose, throat and ear; F. A. Clarkson, chest; J. A. Kinnear, obstetrics.

Reserve Staff.—Doctors M. J. Perkins, O. T. Dinnick, J. M. Baldwin.

TO AMERICAN PHYSICIANS INTERESTED IN THE ALCOHOLIC PROBLEM.

During 1907 over 200 papers, lectures and pamphlets were published in Europe and America, concerning alcoholism and inebriety from a purely scientific point of view. Many of the authors complain that these papers were practically lost, because they did not reach medical men interested in the subject. The Scientific Federation Bureau organized in Boston two years ago, for the purpose of collecting and disseminating the facts concerning the alcoholic problem, proposes to secure a list of medical men who are interested in the scientific study of the alcoholic problem. This list will be valuable for authors and students, who wish to address a special audience of physicians, not only to increase their interests, but to stimulate more exact studies of the subject. Such a list will enable the Bureau to extend its work of accumulating papers and reprints, of all that is written, and keep authors and readers familiar with the work done in this field. All physicians who are interested in the scientific study of the alcoholic problem, and the work of medical men at home and abroad along these lines, are urged to send their names and addresses so as to be registered and receive copies of papers and abstracts from authors and others who may wish to write directly to interested persons. As Chairman of the Board of Directors of the Scientific Federation Bureau, I earnestly request all physicians interested in this subject to send me, not only their own names, but the names of other medical men who would care to keep in touch with the new medical literature along this line, and the latest conclusions in the scientific world concerning this problem.

Address, T. D. Crothers, M.D., Chairman, Hartford, Conn.

ITEMS OF INTEREST.

Change Your Cereal.—As to cereals for a first course, while there are many excellent modern cereals with which every one is familiar, it is well to mention, also, the old staples, says *The Delineator*: oatmeal cooked all night in a fireless cooker or on the back of the range; boiled rice and raisins, or corn-meal mush and raisins; hominy and samp, and plain but nourishing cracked wheat. To vary the cereal course, once a week have the main dish first, and have the corn-meal mush fried and served with syrup after it. Or, have round cakes of boiled rice or farina with scraped maple sugar or with syrup. And, once in a while, give the family a treat of waffles or crullers.

Purchase and Sale of Medical Practices.—The Canadian Medical Exchange for the purchase and sale of medical practices, during the past fourteen years has conducted the vast majority of transfers of medical practices from one physician to another, and offers a short-cut either to buyer or vendor, to secure the goal desired. Especially is this true in regard to vendors, as Dr. Hamill always has from twenty to thirty physicians who are registered with him as buyers, and who have asked him to pilot them on to suitable locations for practice. Vendors can get quick results by taking advantage of the experience and opportunities of this office. A list of his offers will always be found among our advertising columns, the complexion of which necessarily changes each month.

Veronal-Chloroform Narcosis.—Rudolf Stossmann, of the Budapest Polyclinic, finds that if a dose of veronal is given some time before the administration of chloroform, the period of excitation will be considerably shortened. Frequently, the patients will fall asleep before the chloroform is given, and there is much less danger that they will wake up during or immediately after the operation. The reflex irritability is diminished, so that the disagreeable after-effects of chloroform are much less pronounced. Complete unconsciousness generally sets in in from three to five minutes, and very much less chloroform is consumed during the entire operation. The danger of collapse is consequently less imminent and the use of stimulants less often required. Vomiting is only rarely observed after the operation. The necessary amount of veronal is 15 grn., which is best given one and one-half hours before the operation, dissolved in from one-half to one-third glass of warm water or tea. Veronal also acts as cardiac stimulant, thus to some degree neutralizing the cardiac depression set up by the chloroform.—*Pest. Mediz.-Chirurg. Presse,* 1907.

The Physician's Library.

BOOK REVIEWS.

The Horse: Its Treatment in Health and Disease, with a complete guide to breeding, training, and management. Edited by Prof. J. Wortley Axe, M.R.C.V.S., ex-President of the Royal College of Veterinary Surgeons; late lecturer at the Royal Veterinary College and at the Agricultural Colleges of Downton and Wye; Chief Veterinary Inspector to the Surrey County Council; Consulting Veterinary Surgeon to the British Dairy Farmers' Association; Author of "The Mare and Foal," "Abortion in Cattle," "Anthrax in Farm Stock," "Examination of Horses as to Soundness," "Glanders: Its Spread and Suppression," "Swine Fever," "Lithotomy, or The Removal of Stone from the Bladder of the Horse." Published in nine volumes. Divisional Volumes 3 and 4. London, England: The Gresham Publishing Co., 34 Southampton Street, Strand. 1907. Canadian agents: D. T. McAinsh & Co., Bay and Adelaide Streets. Toronto.

Volumes 3 and 4 deal at length with "Health and Disease." They take up the Urine; Disease of the Kidneys; Inflammation of the Bladder; Retention and Incontinence of Urine; Stone in the Bladder; the Nervous System and its Diseases; the Absorbent System; the Organs of Circulation, including Diseases of the Heart, Arteries and Veins; the Organs of Respiration; Asphyxia; Ventilation; Diseases of the Respiratory Organs; Constitutional Diseases; Contagious Diseases; Glanders and Farcy; the Organs of Reproduction, their Anatomy (Male and Female) and Diseases; the Eye, its Anatomy and Diseases; Diseases of the Skin and Parasitic Diseases. Volume 3 contains twelve and Volume 4 nine full-page plates. Both volumes are also freely illustrated. The colored plate of the anterior aorta and its branches is a credit to the author and as fine in detail as any colored plate in a work on human anatomy. The illustration in colors of farcy, appearing in Volume 4, is exceedingly natural and true to that disease.

In Vol. V., Professor Axe considers "The Bony System," including the composition, structure, classification and growth of the bones. He gives the anatomy of the entire skeleton, commencing with the vertebral column, the skull, face, chest, pelvis, fore and hind limbs. In this volume, too, the reader is given full information as to fractures, articulations, diseases of the joints,

sprains to joints, tendons and ligaments, after which the muscular system is taken up. Though volume five does not include as many colored illustrations as volume four, it is replete with engravings and half-tone reproductions of such as external parasite of the horse, skeleton of the horse and man, different vertebrae, ringworm, tapeworms, liver fluke, anl a large number showing the different parts of the skeleton of the animal. We can safely say that volumes four and five are as good as, if not better than, any of its predecessors.

Saunders' Pocket Medical Formulary. By William M. Powell, M.D., author of "Essentials of Diseases of Children," member of Philadelphia Pathologic Society. Containing 1,831 formulas from the best known authorities. With an appendix containing Posologic Tables, Formulas and Doses for Hypodermic Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetric Table, Diet-lists, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. Eghth edition, adapted to the New (1905) Pharmacopeia. Philadelphia and London: W. B. Saunders Company. 1906. In flexible morocco, with side index, wallet and flap. $1.75 net.

This is a capital little book. It is full of information from cover to cover, and undoubtedly worth the price charged. A physician might do worse than carry the Medical Formulary in his pocket to peruse between visits.

The Treatment of Fractures: with Notes Upon a Few Common Dislocations. By Chas. L. Scudder, M.D., Surgeon to the Massachusetts General Hospital. Sixth Edition, revised and enlarged. Octavo volume of 635 pages, with 854 original illustrations. Philadelphia and London: W. B. Saunders Company, 1907. Polished buckram, $5.50 net; half-morocco, $7.00 net. Canadian Agents: J. A. Carveth & Company, Limited, Toronto.

When a surgical work has been endorsed by our profession to the extent of demanding six large editions within eight years, it is lifted somewhat above the plane of ordinary criticism. The writer of this notice counts it as one of his good fortunes to have been a student of the late Frank H. Hamilton, a writer whose work on fractures and dislocations went through eight editions. He has taught the subject of fracture treatment for nearly twenty years, and upon this basis ventures to think that his judgment regarding the new work before us may interest the readers of The Canadian Journal of Medicine and Surgery. Stated concisely, it is that, in accuracy of observation, in clearness of state-

ment, and logical and convincing reasoning, the text of Dr. Scudder's work marks an advance upon anything heretofore published upon the subject. Further than this, in the number, clearness, beauty and practical utility of its illustrations, it is altogether unapproached.

The Ontario Medical Association is to be congratulated upon the fact that Dr. Scudder has accepted an invitation and will deliver the address on Surgery at the meeting to be held in Hamilton next month. No guest more worthy of honor could have been named by the Committee on Papers and Business, and none, we venture to predict, will be listened to with greater interest.

N. A. P.

Personal Hygiene in Tropical and Semi-Tropical Countries. By Isaac Williams Brewer, M.D., Member of the American Society of Tropical Medicine. Illustrated with eight engravings. 12mo, 130 pages. Bound in flexible cloth, rounded corners. Price, $1.00 net. F. A. Davis Company, publishers, 1914-16 Cherry Street, Philadelphia, Pa.

That healthful living in tropical and semi-tropical countries depends wholly upon hygiene and hygienic surroundings is proved by glancing over this little book. A very large proportion of the sickness in warm climates is preventable, the author going to show that it is the native races who attend to and carry out a system of personal hygiene who are the longest livers.

Index of Treatment. By Various Writers. Edited by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital, and Assistant Physician to the Hospital for Sick Children, Great Ormond Street; and H. Stansfield Collier, F.R.C.S., Surgeon to St. Mary's Hospital; Joint Lecturer on Surgery in St. Mary's Hospital Medical School; Surgeon to the Hospital for Sick Children, Great Ormond Street. Bristol: John Wright & Company. London: Simpkin, Marshall, Hamilton, Kent & Company, Limited. New York: William Wood & Company, 1907.

At a time when so much attention is being paid to diagnosis, to the exclusion almost totally of everything else, this book will be welcomed by every practitioner. It is practically a complete guide to treatment, in moderate compass and in a form most convenient for reference. While the best and most up-to-date lines of treatment are laid down in almost all diseases, both medically and surgically, the more elaborate operations which require much skill do not take up any material proportion of the book. The writer deals with non-operative treatment in detail, as well as any minor surgery and emergency operations that any practitioner may be

called upon to perform. Of course the management of labor, whether complicated or uncomplicated, does not come within the scope of this volume. It will be found most complete and most valuable, and should be on the table of every general practitioner. The contributors are men of such high standing that their names alone should be a guarantee of the value of this excellent work.

A. J. J.

Surgical Therapeutics. By Emory Lanphear, St. Louis. The Clinic Publishing Co., Chicago.

This little book aims to teach methods and means of treating surgical cases, without operation, or before operation. The various affections are arranged in alphabetical order, and the treatment briefly outlined—pathology, etiology, etc., are left for larger works. The author is positive in his convictions, and includes in his pharmacopœia many of the newer therapeutic remedies which, in his hands, have produced good results. Much valuable information may be learned in a short time from this small book.

E. A. M'C.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. VII. Nerün to Physiology (Tissues.) Edinburgh and London: William Green & Sons. 1908.

The seventh volume of the Encyclopedia and Dictionary of Medicine and Surgery contains in all 1,322 subject headings and carries the work from *Nerün* to *Physiology*. The work contains an immense fund of information, some of the monographs being very important. The different articles cover the Nerves, Nose, Paralysis, Peritoneum, Pelvis, Paranoia, Parasites, Diseases of the Pancreas, Diseases of the Ovaries, many of the contributions being from the pens of distinguished writers. Quite a lengthy article is found in volume seven, devoted to Pharmacology. Such subjects as Ophthalmic Reaction and Opsinins have not been overlooked. The article on Paralysis covers nearly seventy pages, and is a masterly effort. Volume seven is one of the most important so far published.

W. A. Y.

Traite Pratique de Therapeutique Infantile Medico-Chirurgicale. By Paul Le Gendre and Aug. Broca. Paris: G. Steinheil.

The first edition of this book was issued thirteen years ago, before medical art became enriched through its employment of the serum-, radio-, and ion-therapies, and before it was known that the phagocytic appetite required opsonic stimulation. The demand for another edition is an indication of public appreciation and the new ground to be covered demands much attention on the part of the authors.

Part I., 135 pages, comprises a general discussion of the various therapeutic tendencies and is necessarily brief in its discussion of each.

The remainder of the book discusses in alphabetical order the various subjects considered necessary in setting forth both the medical and surgical therapeutics of infancy.

The task set themselves by the authors is too extensive to permit justice to be done in one volume; certainly in many of the surgical procedures the account given is little more than a summary.

The style is clear and the work is abreast of modern science, but the illustrations are too few and the extent of the task has not allowed sufficient detail. Even those who read the French readily need not go beyond the works published in English to obtain greater satisfaction than will be found here.

B. E. M.

A Manual of Surgery for Students and Physicians. By Francis T. Stewart, M.D., Professor of Surgery, Philadelphia Polyclinic; Associate Surgeon Germantown Hospital, Out-Patients Surgeon to the Pennsylvania Hospital. With five hundred and four illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1907.

This comparatively small volume of surgery is written for the undergraduate who wishes a book easily and rapidly read. The book is essentially brief, but for all that complete and very practical. Omission is made of all historical matter, and the practice described is that which has been gained by the author's personal experience. The book is profusely illustrated, type and reading are clear and distinct, and it fulfils in every way the purpose for which it is written. The publishers' work is very creditably carried out.

P. G. G.

Physiology of the Nervous System. By J. P. Morat, of the University of Lyons. Authorized English edition translated and edited by H. W. Syers, M.A., M.D. (Cantab.) Chicago: W. T. Keener & Co.

So much new work has been done in the study of the nervous system and so extensive have become the ramifications of disease already traced to their origin that it is difficult for anyone but the specialist in that department to follow out the various lines of investigation and to be familiar with the conclusions reached, though these may be of the greatest importance. Making allowance for the special nature of the subject this is a most interesting and lucid book. The author and the translator have the ability to express themselves clearly and to make an abstruse and complicated subject seem relatively lucid and simple.

A review of the anatomical data runs parallel everywhere throughout the book when the discussion of function and the conclusions are held well down to a physical basis, allowing but little place to metaphysical speculation. The newer nomenclature, of course, is used throughout.

A good general acquaintance with this book will clear up many difficulties presenting themselves in the study and diagnosis of the various nervous affections which are encountered in general practice. B. E. M.

Proceedings of the Royal Society of Medicine. Volume I., No. 5. March, 1908. London: Longmans, Green & Co, 39 Paternoster Row. Price, seven shillings and sixpence net.

The volume for March, 1908, consists of the same sections as before, clinical, dermatology, electro-therapeutical, epidemiological, laryngological, medical, obstetrical, odontological, otological, pathological, surgical and therapeutical. The contributors to this volume include such well-known writers as Drs. F. E. Batten, Herbert French, Arthur Latham, F. Parkes Weber, T. H. Openshaw, R. P. Rowlands, W. S. Fox, E. G. Graham Little, J. M. H. Macleod, Sir Malcolm Morris, H. Radcliffe Crocker, J. H. Sequeira, Sir Felix Semon, P. Watson Williams, J. Dundas Grant, Herbert R. Spencer, H. MacNaughton Jones, A. H. Cheatle, and A. H. Tubby. It will be readily seen, therefore, that the Proceedings of the Royal Society of Medicine continue to consist of nothing but the best in medical literature.

Treatment of Internal Diseases. By Dr. Norbert Ortner, Univ. of Vienna. Edited by Nathaniel Bowditch Porter, M.D., Visiting Physician to the New York City Hospital, etc. Translated from the fourth German edition by Frederic H. Bartlett, M.D. Pp. 658. Philadelphia and London: J. B. Lippincott Co. Price, not stated.

That four editions of Ortner's Lectures were required in Germany in nine years seems sufficient reason for the appearance of this excellent translation. It is a book of therapeutic methods and practice, diagnosis, prognosis and prophylaxis being rarely mentioned. Drug therapy is fully considered, the work abounding in prescriptions. These, however, are not stereotyped in character, but are written in such a way that the active components are readily changeable to meet the condition present. The action of the more important drugs is briefly discussed, that they may be exhibited rationally. In his chapter on the circulatory organs, Ortner prescribes a number of crude plant drugs and their preparations, which are rarely used with us.

Throughout the volume other therapeutic measures are pro-

perly emphasized; mechanical and other methods of therapy in heart diseases are fully treated. We note in this chapter, as in others, the American Editor quotes frequently from Forcheimer. The chapter on Diabetes is worthy of special mention, and there is an interesting paragraph summing up Castaigne's recent work on the reduction of common salt in the dietary of patients with Bright's disease.

We must ask the American Editor why Winnipeg appears as the only Canadian station in his list of resorts for consumptives, his list of "Moderately Dry" (States?), reading, "Texas, Inland Southern California, Minnesota, Dakota, Nebraska, Winnipeg." We are surprised that tuberculin therapy is dismissed with such few words by Ortner. Porter endeavors to overcome this, but in giving dose fails to mention which tuberculin, and at what interval. The general get-up of the book is good and type is clear. Diseases of the nervous system are not considered by Ortner, though Porter adds a splendid chapter on Neurasthenia; the publisher heads the pages of this chapter, Infectious Diseases.

J. H. E.

Nervous and Mental Diseases. The Practical Medicine Series, Vol. X. Comprising ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post Graduate Medical School. Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Policlinic; Clinical Professor of Nervous Diseases in the Northwestern University Medical School; Ex-President Chicago Neurological Society. And Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School; President Chicago Neurological Society. Series 1907. Chicago: The Year Book Publishers, 40 Dearborn Street.

This little work is one of a series of ten volumes issued at about monthly intervals and covering the entire field of medicine and surgery. Each volume of this series is intended to include the principal steps of advancement recorded for the year prior to its publication, on the subject of which it treats, and this work successfully carries out that purpose. Only twenty-five pages of two hundred and twenty-four are devoted to mental diseases, but the subjects are all treated in a concise and instructive manner. The arrangement of the subject matter throughout the book is most convenient, and by its help the busy practitioner may, without much effort, become familiar with the current discussions and investigations on nervous and mental diseases. N. H. B.

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Original Contributions.

MOUTH-BREATHING.*

BY JOHN HUNTER, M.B., TORONTO.

ANY discussion of this subject involves some consideration of both the normal and abnormal conditions of the respiratory tract. The supply of air provided for animate life is practically unlimited. In the human race the respiratory passages under normal conditions are quite capable of conveying to and fro an adequate supply of air for the needs of the body. The quantity, the character, and the preparation of the air required in respiration are of even more vital importance than are the same factors in the food supply. A man may live for a few weeks without food, for several days without drink, but only for a few minutes without air. A supply of nutriment is called for three or four times in twenty-four hours, but a fresh supply of air twenty to thirty thousand times.

The respiratory tract consists of the two nasal chambers, of the nasal and oro-pharynx, of the larynx, trachea, bronchial tubes and air cells. The functions of this tract are varied and complex. Provision has to be made, not only for the passage of an adequate supply of air, but the air itself must be more or less radically changed before reaching its destination. The air must be purified, warmed and moistened. The projection of hairs—known as vibrissæ—into the vestibule, and the moist surface of the wide expanse of mucous membrane covering the turbinates and walls of the nasal chambers, arrest most of the foreign bodies in the air, whilst the two or three quarts of warm liquid serum and mucus secreted in the twenty-four hours warm and moisten the air. The accessory cavities—maxillary, frontal, and sphenoidal—act as reservoirs for maintaining a supplementary supply of air.

* Read at meeting of the Ontario Medical Association, Hamilton, Ont., May, 1908.

In about ten per cent. of school children there is more or less obstruction found in the nares and pharynx. When this obstruction is of a permanent character, e.g., too narrow nasal chambers, septal deflections, spurs or morbid growths, hypertrophied turbinates or tonsils, adenoids—an auxiliary respiratory route has to be provided, hence mouth-breathing. Even under normal conditions, the temptation to breathe through the mouth is a very insidious one. Watch a crowd hurrying past on a frosty morning, and notice the number of mouth-breathers. Most of these are quite unconscious of the act, and could stop doing it without inconvenience.

However the habit may have been acquired, the effects are most decidedly prejudicial to health. The earlier in life the practice is established, the more pernicious the consequences. In infancy and childhood, developmental changes take place so rapidly that any force exerting an abnormal influence readily causes deformity. If one nostril of a young animal—kitten or guinea pig—be occluded, well-marked deformities follow. Under normal conditions the jaws are kept in close apposition by the action of the muscles of mastication. This pressure, during the period of development, helps to spread the alveolar processes laterally, giving the jaw a semi-circular form, and thereby providing space for the normal dental alignment of each set of teeth. When the mouth is kept open, as in mouth-breathing, all counter-pressure from the lower jaw is removed, and the following morbid conditions are produced:

(1) The alveolar process of the upper jaw grows downward; (2) the tension of the muscles—which can be readily demonstrated by placing a finger between the upper lip and the jaw, and then opening the mouth—forces the posterior extremities of the upper jaw inward, giving to it an angular, instead of a semi-circular form; (3) this deformity crowds the upper incisor teeth forward, and causes a disfiguring dental alignment. In normal respiration, with the mouth closed, there is a small space between the dorsum of the tongue and the under surface of the palate. The warm air in this space exercises less pressure on the palate than the cold, heavier air in the nares. The negative pressure below the palate, together with the spreading out of the alveolar processes, during the period of development, gives to the palate its normal dome-like shape. In mouth-breathing the tongue falls to the bottom of the oral cavity, thus producing a large space for the reception of air that is colder and denser than that in the nares, and thus causing a positive pressure upwards on the palate. This force, together with the approximation of the extremities of the alveolar process, produces the high-arched palate so common in mouth-breathing. The so-called pigeon or chicken-breast, and

impaired hearing, are morbid conditions very frequently associated with this habit.

The changes produced by mouth-breathing greatly mar both the symmetry of the face and the expression of the features. The following characteristics are very much "in evidence": Drooping lower jaw, open mouth, upper lip retracted, projecting irregular incisor teeth, with cavities due to caries; poorly developed, inactive nostrils, lustreless eyes, partial ptosis, obliteration of the folds that give expression to the face, thus producing the more or less stupid, vacant, idiotic appearance so commonly seen during childhood and adolescence.

Were the pernicious effects of mouth-breathing confined to physical deformities, we would be fully warranted in seeking its prevention, but the evils are not thus limited. This habit can produce disease as well as deformity. The functions of the mouth are entirely different from those of the respiratory tract. The pint or two of saliva is all required for mastication and digestion. When this fluid is exhausted by the air, as it passes through the mouth, both of these processes are injuriously affected and the nutrition of the body impaired. This malnutrition gives rise to anemia, lassitude, flabby tissues, mental irritability and depression. The red corpuscles may fall from 5,000,000 to 1,500,000, and the hemoglobin be reduced fifty per cent. The resistance to pathogenic micro-organisms is very much lowered, hence the greater liability, in mouth-breathers, to contagious and infectious diseases, and the higher mortality from these.

The extremes in temperature between indoor and outdoor air are very imperfectly modified in mouth-breathing. The large volume of cold air that comes in direct contact with the mucous membrane of the mouth, pharynx, larynx, trachea, bronchial tubes and air-cells produces more or less shock. This affects the vasomotor system, in first producing pallor of the tissues, and secondly, hyperemia through the reaction. These sudden changes soon produce morbid conditions in the exposed mucous membrane, and in the serous and glandular structures. The mucous membrane becomes hypertrophied, and the secretions vitiated in character.

The morbid changes that mouth-breathing produces in the pharyngeal end of the eustachian tube interfere very seriously with the ventilation of the middle ear tract, hence the very intimate association found to exist between mouth-breathing and the suppurative processes, so frequently found in the tympanic cavity and in the mastoid cells.

The tonsils are peculiarly exposed to infection in mouth-breathing, hence the great frequency with which the lymphatic glands in the neck become involved.

The pitch, tone and other characters of the voice are seriously impaired by this habit.

If mouth-breathing can retard physical development, produce deformity, increase vulnerability to disease, and mar personal beauty, it can also produce equally great perturbations in the mental and moral conditions. There is a very intimate connection between the vascular and lymphatic systems of the brain, and the upper portion of the respiratory tract. The effects of strong mental impressions and emotions are reflected in the pallor or turgescence of the mucous membrane of the respiratory tract, and in the diminished or increased secretion of the serous and mucous glands. The psychic functions may be equally perturbed by morbid conditions in the naso-pharynx. Children and youths who were nervous, irritable, quarrelsome, mischievous, untruthful, dishonest, disobedient, indolent, ignorant, immoral, in brief, in Sunday School parlance, "possessed," when the respiratory tract was obstructed, have evinced, after normal conditions were restored by an operation, a complete change in mental and moral character, the malevolent characteristics giving way to the Christian graces. A stupid, backward, incorrigible boy may, by the removal of adenoids, enlarged tonsils or other obstruction, be transformed into a bright, intelligent, exemplary student, who, in due time, becomes the consecrated minister or the self-sacrificing medical missionary.

Treatment.

If medical science has one mission greater than any of the others, it must surely be the prevention of disease and of physical disability. If the medical profession has much to its credit, there is also much that can be justly charged against it. How often does the physician, who is practising in the country, after he is through with his professional call to the sick member of the family, go out with the farmer to inspect some of the prize animals amongst the flocks and herds—in the city he goes to inspect an auto, or perchance a thoroughbred pup—but in either case, how seldom does he make it his duty to inspect the physical condition of the children in the home? There are hundreds, if not thousands, of men and women in Ontario to-day who are more or less handicapped for life through the ignorance, indifference, or gross carelessness of parents. In many of these cases, we, as physicians, must frankly admit that we had many opportunities of educating these parents and helping their children, that we failed to avail ourselves of. Many a child is punished for delinquencies, when he should receive sympathy, whilst the father, and ofttimes the family physician, too, should receive the horsewhip.

The prevention of faulty habits, physical, mental and moral,

should be the work of both parents and physicians in dealing with children. The family physician should consider it to be a sacred duty to educate parents in the imperative need of normal respiration. Were parents properly informed of the pernicious influences of mouth-breathing, few, who have any common sense at all, would refuse to have enlarged tonsils or adenoids removed. When an efficient medical inspection of schools is carried out, most cases of mouth-breathing will doubtless receive proper treatment.

The attention of the parents should be especially drawn to the character of breathing when the child is asleep. The obstruction may not be sufficient to overcome the conscious effort to breathe through the nose, but quite enough to cause mouth-breathing when the child is asleep. The close association of mouth-breathing with middle ear and mastoid trouble should put parents and physicians on their guard when the slightest symptoms of ear trouble develop.

Treatment naturally divides into medical and surgical. The former consists in keeping the respiratory tract as free as possible. Children should be taught how to "blow the nose." This should always be done gently. The nostrils should not be held by fingers or handkerchief, or any violent expulsory effort used, lest infectious material be forced into the middle ear. In rhinitis, the excessive secretion should be washed away with a mild alkaline solution. The inflamed membrane, after being cleansed, can be protected by an oily solution composed of menthol and albolene. The general health should be carefully attended to; our children get altogether too much candy and food-stuffs containing a large amount of sugar. Children should occupy well-ventilated bedrooms, and should be taught to go to bed early.

The surgical treatment can be briefly summed up by saying that all obstructions that can be removed should be removed as effectively as possible.

To sum up briefly, let the family physician examine every member of the family, and whenever he finds morbid conditions that interfere with the ingress and egress of a normal supply of air, insist on the importance of proper treatment being carried out. It is not enough to dismiss a mouth-breather with the removal of adenoids or enlarged tonsils. The patient should be kept under observation for months until the habit of normal breathing be established. Many devices may be resorted to. Ask the child to walk or run a certain distance with the mouth closed, or to breathe through the nose for a specified time. Patience and discipline must be exercised. Two mottoes should be hung up in the home. One for the parents, "Keep your eyes open"; one for the children, "Keep your mouth shut."

BIER'S HYPEREMIC TREATMENT, WITH DEMONSTRATION OF TECHNIQUE.*

BY FREDERICK WINNETT, M.D., TORONTO.

CZERNY, of Heidelberg, in presenting Bier with the Kussmaul Prize, in August last, ranked the hyperemic treatment with Lister's discovery of antisepsis.

Although incredulous at first, surgeons have now adopted the method, and apply it in most hospitals abroad.

Willy Meyer says: "Experience has shown that this conservative treatment is by far the best means at our disposal for tuberculous joints and bones. I consider it the duty of every medical man to study, and thoroughly to master, the principle of Bier's Hyperemic Treatment, in order to bestow on his patients the great and manifold benefits of this truly wonderful discovery."

Rokitansky observed that, in hypertrophy of the heart or distortions of the spine, which produced hyperemia, or brown induration of the lungs, pulmonary tuberculosis is extinct, or does not occur. On the other hand, it had been noticed by Farre, Travers and others that, in pulmonary stenosis, causing anemia of the lungs, phthisis was usually found present at post-mortem.

From these observations, Bier was led to try the effect of an increased supply of blood to all tubercular foci.

In all efforts of the body to resist disease or injury, hyperemia is present. There are two forms of hyperemia—active, or arterial, and passive, or venous, hyperemia.

In treating acute surgical infections, Bier says we are to break with all our former iron-clad rules regarding the treatment of these affections, and in place of opposing its phenomena by rest, elevation, pressure, cold, incisions and drainage, he tells us they are the wise provisions of nature, to be encouraged and increased.

Meyer says he has demonstrated, beyond the shadow of a doubt, that his method is far superior to those formerly in vogue.

Notzel demonstrated the beneficial effects of hyperemia. He inoculated 67 rabbits with fatal doses of anthrax, and succeeded in keeping alive 51 by hyperemia. A few weeks later these animals succumbed to the same doses when the hyperemia was not used.

Various theories are advanced to explain this fact, but Bier prefers to generalize and believe hyperemia merely assists the natural inflammatory action when it has not been sufficient. It causes rapid cicatrization of granulation tissue and encapsulates bacteria.

* Read at the meeting of the Association of Physicians and Surgeons, Toronto.

Hyperemia has a solvent action on granulation and inflammatory material.

Water and all soluble substances are absorbed by blood vessels, while bodily elements, as fat, are absorbed by the lymph vessels.

Bone and cover epithelium are increased by hyperemia, and the passive form is preferable. Organs with active functions require other stimuli in addition, and as work is done by oxidation, arterial blood is required. Among many examples is one recorded by Helfirch, who, in a girl of 16, with an increase of 3 cm. in her leg from a chronic ulcer, by the aid of hyperemia, caused the other to elongate 2 cm.

Bier says: "As for myself, I have not the least doubt that arterial and venous hyperemia relieve pain; that both are solvents; that arterial hyperemia absorbs, and that passive cures infectious diseases, for I have seen this with my own eyes innumerable times."

To produce active, or arterial, hyperemia, Bier advises hot-air apparatus, at a temperature of 212 to 240 degrees F., one or two hours daily.

If applied to an extremity, the body temperature rises 2 degrees, and subsides in 1 1-2 hours.

Watery and bloody effusions are readily absorbed, and without immobilizing.

The treatment is advised in all forms of chronic stiff joints, but passive hyperemia is also effectual in these cases.

In eight rebellious cases of trigeminal neuralgia, five were cured with the hot air.

I have recently treated a gentleman for a tender stiff ankle, following a compound fracture of the leg one year previously. It and the foot were greatly swollen, tender, and almost immovable. Under chloroform, I was unable to move it. One hour daily at 240 degrees produced an astonishing improvement. In two days the weight could be borne without pain, and in ten days it had almost entirely regained its normal size and freedom of movement. After each application of heat and passive movement, the various joints were felt to move, and a grating noise was distinctly audible.

The hot-air apparatus gives instant relief in sciatica, lumbago and pleurisy.

A personal experience may be interesting. A sharp attack of pleurisy rendered me almost breathless, and the hot-water bag gave no relief. Hot air at 240 degrees gave complete relief in 10 or 15 minutes, and there was no return of pain.

Passive hyperemia, by means of a constricting bandage, was first used by Ambrose Paré to promote the formation of callus.

In 1886, Thomas reported 14 cases thus treated for retarded callous formation.

The stasis bandage is applied for one-half hour daily, being careful not to produce pain, but rather to relieve it; the temperature of the part should not be reduced nor the pulse affected. A bluish red should be produced, while vermilion spots signify too tight a bandage. When the time of application is limited to an hour or two the hyperemia should be intense.

For affections of the elbow, wrist or hand, the stasis bandage is usually applied to the arm. For the shoulder joint, a specially applied one is used high up. For affections of the knee, ankle and foot, one is applied to the thigh. It is not applicable to the hip.

Suction apparatus are used for the body, and are becoming popular in place of the stasis bandage.

If an abscess is present, the pus is evacuated by a half-inch incision. In one to three days afterwards stasis hyperemia is instituted.

Pain is quickly relieved, and active and passive movements are encouraged as soon as they are free from pain.

Bier stated that a stiff joint, following the healing of tuberculosis, was not a good result.

It was possible to restore the function of a joint in which the disease had progressed so far as to cause changes in the bone and cartilage, with the formation of multiple fistulæ.

During the treatment, the swelling subsided, and the large fungous masses were transformed into hard connective tissue, which, by further hyperemia treatment, were absorbed.

Abscesses were opened without any fear of a mixed infection, if the cupping glasses were properly applied.

Treatments last from nine to twelve months. Bier's statistics of cured tuberculosis are, for wrist, 88 per cent.; elbow, 72.7 per cent., and of the foot, 61.5 per cent.

Each of these cases remained well and obtained a useful movable joint.

Willy Meyer records a typical case treated with the stasis bandage. A man, 45 years of age, came to his clinic with an advanced tuberculosis of the right elbow joint. On account of severe pain, he supported his arm with the other hand. It was flexed to an angle of 110 degrees. His friends were instructed how to apply the bandage, and no other treatment was used. Two weeks later he again entered the clinic, this time without supporting the hand. He had lately passed comfortable nights, and the pain had much diminished. In nine months the patient had a useful arm, and returned to his work as fireman.

Gonorrheal arthritis is at once relieved of pain, and motion

becomes possible. The stasis bandage should be applied eleven hours out of the twelve.

Bier says: "Stasis hyperemia has never failed me in the graver forms of gonorrheal arthritis, and the successes, as regards rapidity of cure and the function of the extremities, are brilliant, as compared with anything I have ever seen before."

In thirteen cases of facial erysipelas, the bandage was applied about the neck. Duration of disease four to nine days.

In acute surgical infections, the treatment is of still greater importance, and is limited only by the ingenuity of the surgeon. Meyer records the following case:

A young physician, 26 years of age, while wrestling, sustained a compound dislocation of the interphalangeal joint of his right thumb. Doctors are careless. Reduction is done on the spot, and a wet handkerchief wound around the finger. Shortly afterward, without further disinfection, a sterile dressing is applied. Six days later he comes under my care with an acute periostitis of both phalanges and a suppurating joint. The thumb is very much swollen. With our former methods of treatment, I should have rather despaired of saving the finger and joint. As it was, I made a short incision on the opposite side of the joint, and one short cut down to each phalanx, dividing the periosteum, and avoiding the tendons. Immediately, on the operating table, the elastic bandage is applied, and worn for 22 hours out of the 24, interrupting one hour at the end of every half day. The pain subsided within 24 hours. The temperature, which before had been 102, was normal on the fifth day, and the patient discharged on the twelfth with the finger much improved. The time of wearing the bandage was gradually reduced. It was applied in all for three weeks. In the fifth week a small sequestrum formed. To-day the finger is healed and motion of the interphalangeal joint is unimpaired. No other treatment that I am acquainted with would, I think, have produced an equally satisfactory result.

The bandage about the neck for eleven hours, twice daily, has been used successfully in various affections.

A parulic fistula of upper eye-tooth, with abscess formation over the respective nasal bone, in a young lady; cut in face avoided.

Willy Meyer treated a boy of 16, with fracture of the base of the skull, starting six hours after the accident as a prophylactic. Convalescence was astonishingly rapid. Lymphadenitis, parotitis, acute mastoiditis, frontal sinus and antral affections have been treated successfully.

Vorschuetz, of Cologne, reports six cases of tubercular meningitis, of which five were cured. Repeated lumbar puncture was also used.

In a case of periosteal whitlow, it was interesting to find the patient allowed the hand to hang over the side of the bed, and said it relieved the pain. A short incision allowed the pus to escape. A wet boracic dressing was applied, and a stasis bandage about the finger for eleven hours twice daily. In four days he was discharged convalescent.

A case of ungual whitlow was incised, and the bandage applied about the finger. At first it was too tight and caused pain. Before leaving the surgery she said the pain had ceased and that she could move and use it. It was allowed to hang down. Next day she said she rested well, without pain, but shortly after the bandage was removed pain returned and kept her awake till it was re-applied. In three days she was discharged convalescent.

THE PLASMA SOLUTION IN AFFECTIONS OF THE EYE, NOSE AND THROAT.

BY MURRAY M'FARLANE, M.D., TORONTO.

In addition to the many surgical and medical measures directed to the treatment of diseases of the eye, nose and throat, we are frequently confronted by the necessity of cleansing or irrigating these organs, and the question arising is "How may this be accomplished with the minimum amount of irritation to the diseased structures?"

Fifteen years since, becoming dissatisfied with the existing formulæ commonly employed as sprays or douches in nose and throat work, I considered what would best meet the existing indications for a non-irritating solution, which must be of an alkaline reaction and which could be used for an indefinite period, if necessary, as a means of removing crusts or secretion from these organs and their accessory cavities.

The mucous membrane of the nose, particularly, is very intolerant of even the slightest irritant, and I have found the combination of crude alkalies and antiseptics in common use very unsatisfactory and meeting no scientific indication, being in fact, a survival of the days when so-called "Catarrh" was treated by germicides of various natures. The solutions were not of sufficient strength to destroy the micro-organisms in any case, but were quite able to cause irritation and engorgement of the tissues if used for any length of time. Then we are also aware that when once a disease due to these organisms, attacks a mucous membrane and becomes manifest by increased secretion and swelling of the parts, as seen in acute rhinitis and influenzal attacks, they have penetrated to the basement membrane and live out their life history undisturbed by surface applications which cannot penetrate and destroy them without injury to the tissues. I am here speaking of solutions containing antiseptics used in the form and quantity of sprays and douches, not of local treatment of ulcers, etc., where drugs of sufficient strength can be employed without danger and under control of the surgeon. In ordinary chronic simple rhinitis very few organisms are to be found in the nasal cavities. The researches of St. Clair Thomson and others clearly establish this fact so well recognized at the present time. In acute conditions of a catarrhal nature sprays are, in the majority of cases, contraindicated, owing to the possible danger of causing extension of the disease to the eustachian tube and thence to the middle ear and mastoid.

After many trials of different salts, the alkalinity of the blood

plasma was considered to promise the best results, the blood being of such an alkalinity as kept the balance between exosmosis and endosmosis, and certainly was a typically non-irritating medium and incapable in a normal state of inducing any pathological cellular change.

Castaigne and Rothery (1) have demonstrated that a saline solution must be of a certain cryoscopic index, about 0.78C. If higher or lower it brings about histological changes in the tissues and they believe that under normal physiological condition the osmotic tension is maintained by the sodium chloride and other salts being in proper proportion in the blood plasma.

Achard and Paisseau (2) by intravenous injections of hypotonic and hypertonic saline injections .20 to 1.50C were able to set up epithelial changes in the kidney. Experiments by Roth-Schulz and deKarosy (3) are of interest as regards endosmosis and exosmosis. With blood upon one side of an animal membrane diffusion is much slower than when water is used, owing to the different diffusibility of some of the blood salts, the chlorides passing more readily than the others contained in the plasma.

All this shows us that any solution of the same cryoscopic index, the same osmotic index, having the same salines and the same specific gravity as the blood plasma, must of a necessity be the most scientifically adapted to the purpose of a cleansing spray, or where it is desirable to use a non-irritating injection into the tissues of the body.

Any solution stronger or weaker is capable of bringing about cellular change, and upsetting the normal osmotic balance so necessary to a healthy condition of the parts. In consideration of these facts, I had a tablet made by Parke, Davis & Co., containing the osmotically active salts of the blood which, added to 1,000 drops of water, made a solution of the same alkalinity, specific gravity and cryoscopic index as the plasma. For two years it was made up for my own use. Then, after sending samples to Europe and America, the firm got such encouraging reports that my permission was asked to place the tablets upon their public list. This was given and the Plasma Nasal tablet (Dr. Murray McFarlane) for use in the nose and throat may now be obtained from the above and several other firms of manufacturing chemists. They are year by year increasingly used in different parts of the world; and the writer has received many very gratifying reports from some of the most eminent men in the medical profession, telling of the satisfaction they had derived from their use in affections of the nose and throat especially; they finding it, as I have done, to furnish, where sprays are indicated, a cleansing medium which can be used for an indefinite period without the slightest irritation or engorgement of the tissues. The addition of 1/16 of a grain of menthol

to each tablet renders it very pleasant and aromatic, disguising the taste of the sodium chloride.

In diseases of the eye characterised by an increased secretion, the plasma solution has been found very suitable as a means of cleansing the cul-de-sac. It may be used instead of distilled water in collyria, containing remedies not incompatible with the sodium and potassium salts. It has also been used with good results either alone or containing cyanide of mercury, dionin and other drugs in subconjunctival injections.

Professor Darier, of Paris, in his "Ocular Therapeutics" (4) says: "Many liquids have recently been proposed for subconjunctival injection. A new physiological salt representing exactly the osmotically active salts contained in blood, has been used by Poehl apparently with excellent results." (It is described in *Merck's Annual*, March, 1900.) The same salts were introduced to the American profession in 1895 by the writer, 5 years prior to Poehl's investigations.

The solution can be used for irrigation purposes in any part of the body, and without the menthol has been of service instead of the Normal Saline after general operations with shock, and per rectum, to relieve thirst where fluid cannot be taken into the stomach.

In conclusion, the writer would say that one tablet is to be added to four tablespoonfuls of lukewarm sterile water, or in proper proportion, if a less or greater quantity is desired, and used as a spray or irrigation whenever in the opinion of the surgeon such is desirable. For hypodermic or subconjunctival injection it is used without the menthol.

References.

1. *La Semaine Med.*, 1903.
2. *Compt. Rend. Soc. Biol.*, 1904.
3. *Arch. Int. de Physiol*, Vol. 1, 1904.
4. *Ocular Therapeutics*, 1903, page 30.

Selected Articles.

STUDIES ON THE HYPNOTIC ACTION OF THE VALERIC ACID GROUP.

Prof. A. van der Eeckhout, of the Veterinary College in Brussels, reports a number of experiments made on animals, to determine the physiological action of "bromural." The report is from the Pharmacological Institute of the University of Heidelberg, and explains that quite recently monobrom-isovaleryl-urea has been synthetized by Dr. Saam, and introduced as an hypnotic under the name bromural $(CH_3)_2CH.CHBr.CONH.CONH_2$ It occurs in the form of white, almost tasteless, needle-like crystals, which are soluble in hot water, ether, alcohol, and alkalies, but with difficulty in cold water. Its melting-point lies at 146° C. Clinical tests showed that 0.3 to 0.6 grams will generally induce sleep in from five to twenty-five minutes. This sleep lasts from three to five hours, unless natural sleep supervenes or a second dose is given, The perfectly natural and after-affects have not been observed.

Before testing the drug clinically, its relative harmlessness was proven by experiments on animals. Deep hypnosis may here be induced without any deleterious action on circulation or respiration, so that the drug can be considered an efficient, non-toxic hypnotic.

Other similar compounds were also investigated. The isovaleryl-urea proved inactive. The bromine substitution product of ordinary valeryl-urea was also free from hypnotic effect, while that of methyl-ethyl-acetyl-urea showed about the same hypnotic action as bromural. Analogous amides of brom-isovaleric acid were also soporific but too toxic.

Experiments on frogs showed no signs of irritation. The depressive action affected first the cerebrum, then extended downward. The heart was influenced only with larger doses.

The action on rabbits was found to be about the same as on frogs. There was never irritation. Respiration was slowed early. The normal hypnotic dose for a rabbit is 0.2 to 0.3 grams per kilogram but the individual susceptibility varies. A dose of 1 gram per kilo is sometimes fatal. The animal will wake up, but refuses food and dies in several days. No lesions were found post-mortem.

Bromural was also demonstrated to have an hypnotic action on dogs. Therapeutic doses cause sleep without affecting respiration

or circulation; toxic doses give rise to a transient period of intoxication, with slowing of respiration. Nervous after-effects are observed only after toxic doses, and the stomach tolerates the drug well.

Conclusions.—Bromural acts promptly as hypnotic on frogs, rabbits, and dogs, and has no disagreeable by-effects in therapeutic doses. It shows an elective action on the cerebrum, and leaves the cord and medulla unaffected.

It is relatively harmless, and even large, toxic doses are seldom fatal, though they slow respiration considerably.

It seems to be free from cumulative action and does not irritate the stomach. While therapeutic doses hardly affect the respiration, the first toxic effect produced by somewhat larger doses is a slowing of respiration, with a diminution of the amount of inspired air. The blood-pressure remains normal at this stage. In this respect, the drug differs from all other haloid compounds of the fatty series (chloroform, chloral hydrate, etc.). With these, the disturbance of the vaso-motor centre is the most pronounced by-effect.—Archiv f. experiment. Pathol. u. Pharmakol., lvii, Nos. 5 and 6.

COMPARATIVE POTENCY OF HYOSCINE AND SCOPOLAMINE HYDROBROMIDE IN REFRACTION WORK; EVIDENCE AS TO UNMISTAKABLE NON-IDENTITY.

Dr. Wendell Reber, of Philadelphia, contributes an interesting article upon this subject in the *Journal of the American Medical Association* for April 25. His paper was read in the Section on Ophthalmology of the American Medical Association at its Atlantic City meeting in June, 1907. For some unexplainable reason this article, which bears so strongly upon the controversy concerning the alleged identity of hyoscine and scopolamine, has been withheld from publication for eleven months. This is of peculiar interest, inasmuch as the editor of the Association Journal, during this period, has been asserting and reasserting most vociferously through the columns of that journal that these two alkaloids are both chemically and pharmacodynamically identical. Dr. Reber's conclusions, which were based upon careful experimental work, made upon human beings, are diametrically opposed to the assertions of Dr. G. H. Simmons, Dr. H. C. Wood, Jr., and others in the *Journal of the American Medical Association* and its "anvil chorus."

Dr. Reber was led to these experiments by an experience reported in the *American Journal of Pharmacy* in 1889. At that time he found that when one drop of a 1/10-per cent. solution of

hyoscine hydrobromide was used in the right eye, and one drop of the same strength solution of the scopolamine salt in the left eye of a youth of 16 with normal eyes, the reaction of the ciliary muscle was decidedly different in the two eyes. This led him to the conclusion that there was a difference of action between the two alkaloids, in spite of their alleged identity.

Following up this earlier experiment, he says that "within two years three persons were found who were so doubtful about the acceptance of even a plus 0.25 D. sphere (under cycloplegia) as to fit them for these tests." These three persons were a 22 and 26-year-old female and a 20-year-old male. He accordingly made upon them the same experiments already recorded with the 16-year-old boy some years previously. In the right eye 1/10-per cent. solution of hyoscine hydrobromide (Merck) was inserted and in the left eye scopolamine hydrobromide (Merck) solution of the same strength, the solutions being especially prepared for experimental use by a reliable pharmacist. The utmost care was exercised in order to eliminate all possible sources of error. It was found that the average time of beginning action on the pupil was 10 minutes for both drugs and all the eyes. Full dilation of the pupil occurred in 30 minutes with the hyoscine in the two females and in 45 minutes with the male. (This difference was attributed to the more sensitive sympathetic nervous system in the females.) Under scopolamine full pupillary dilation occurred in 40 minutes in the females and in 60 minutes in the male. According to these findings, therefore, the average time required to produce full pupillary dilation under hyoscine was 35 minutes in the three cases, and under scopolamine 47 minutes.

The effect on the accommodation of each eye was also determined, and it was found that the average time for onset of full cycloplegia under hyoscine in four cases was 59 minutes, while the average time for onset of full cycloplegia under scopolamine was 92 minutes. So that, to quote Dr. Reber, "The relative pharmacodynamic power of hyoscine hydrobromide and scopolamine hydrobromide as used in ordinary office work may be said to be somewhere close to 59.92. Or to reduce it to the commoner form of statement, hyoscine in these test cases showed itself approximately 50 per cent. more potent than scopolamine in producing cycloplegia for refraction work," and he very pertinently adds, "So much for the academic phase of the matter which seems to be rather at variance with the claims which chemistry makes for these two drugs."

Dr. Reber follows with an interesting study of the chemistry of hyoscine and allied products derived from the Solonaceous plants. He shows that hyoscine hydrobromide and scopolamine hydrobromide were made official in the third edition of the German Pharmacopeia (under the name of the latter), in which they were as-

serted to be identical "through the influence of E. Schmidt," the authority most quoted by those asserting the absolute identity of these two alkaloids. Apparently this belief in their identity is a one-man dictum which has been passed from Schmidt to the German Pharmacopeia, and thence over to the makers of the U. S. Pharmacopeia.

To show that this difference in action between hyoscine and scopolamine cannot be due to any difference in the purity of the two products, Dr. Reber quotes his correspondence with Merck & Company, to show that both the hyoscine and scopolamine hydrobromide had a rotatory power of 20. In other words, they are chemically identical, of the same degree of purity, yet pharmacodynamically different.

An interesting fact brought out in a letter of Merck & Co. is the statement that there are on the market inferior qualities of scopolamine which test only 6 degrees, other products having been found as low as 2 degrees. This bears out the statements made by The Abbott Alkaloidal Company concerning the impurity of the commercial scopolamine upon the market.

Dr. Reber says: "This leaves the matter precisely where it was in the beginning, namely: That with two drugs, said to be absolutely identical as to clinical effect, pharmacodynamic power, molecular build and reaction with the polariscope, there should seem to be a more or less uniform difference in potency when tested by the delicate accommodation reaction."

He suggests also that there may be a pharmacodynamic difference between other substances which are known to be chemically identical, such for instance as caffeine and theine, cocaine and stovaine; the latter said to be chemical isomers, yet exhibiting wide differences in their action.

"In the last analysis," says Dr. Reber, "it is always the clinical phase of such studies that interests us most." With this we most emphatically agree, since in this important report the claims made by Abbott, verified by many practitioners, concerning the non-identity of the action of hyoscine and scopolamine are upheld at every point. Dr. Reber shows that hyoscine and scopolamine differ decidedly in their action upon the eye. If the slightest difference of action of these two substances is admitted the whole argument of the J. A. M. A. critics of Abbott must break down. Dr. Reber prefers the hyoscine to scopolamine in his refraction work, just as many others prefer hyoscine to scopolamine when the alkaloids are used for anesthetic or analgesic purposes.

The discussion of this article is interesting, since it bears out the contentions of Dr. Reber in most points. This discussion was taken part in by Dr. Albert E. Bulson, Jr., Fort Wayne, Ind., Dr. S. D. Risley, of Philadelphia, Dr. Chas. A. Oliver, of Philadelphia, Dr. G.

H. Price, of Nashville, Dr. Allen Greenwood, of Boston and Dr. S. L. Ziegler, of Philadelphia. Dr. Bulson, by the way, agreed with Dr. Reber that "hyoscine is more effective than scopolamine as a cycloplegic." This is interesting in light of the fact that Dr. Bulson is the editor of the *Indiana State Medical Journal* and has reprinted in part and expressed emphatic approval of the attacks upon the H. M. C. anesthetic, in which attacks the alleged identity of hyoscine and scopolamine is a most important part of the argument.

Some of those discussing the paper speak of the toxic action of hyoscine, but apparently none of them had made any effort to discriminate between hyoscine and scopolamine. Dr. Reber brought out the point that the worst case of toxemia he had ever seen had resulted from atropine (arrested secretion and excretion).

This paper is one of the most important contributions to the hyoscine-scopolamine controversy that has as yet appeared, and it, along with the facts it uncovers, should sink deep into the true heart of every fair-minded man—every real doctor.

ABSTRACTS.

Dionin in Affection of the Respiratory Organs.—The advantages of dionin, as previously discussed by Mayor and Hoff in connection with the affections of the respiratory organs, and especially in whooping-cough, have been emphatically confirmed by J. Winterberg's description of its therapeutic value. The author records cases of cough in which dionin adduced the desired results when all other remedies had proved unavailing. He emphasizes, moreover, the absence of unpleasant secondary effects, as well as the fact that dionin may frequently be taken daily for many weeks, without losing effect or inducing craving, which renders it unnecessary to increase the dose or to change the remedy. It is this property of the preparation which renders it so valuable in chronic affections of the bronchi; and, in addition, it exercises scarcely any influence upon the blood-pressure, and retards the respiration but slightly. It is accordingly one of the comparatively innocuous morphine derivatives, whereas morphine itself, and especially heroin, give rise to a considerable depression of the respiratory centre. This accords with the therapeutic observations of V. Vallerani, whose comparative experiments with dionin and codeine led him to formulate the following conclusions: Dionin can hardly be described as cumulative in its action, and loses but rarely its efficacy by long-continued use. At the same time it is a prompter sedative in cough than codeine. It is pref-

erable to the latter in that its prolonged use does not give rise to unpleasant secondary effects upon the organs of digestion, the heart and the nervous system. It surpasses codeine, moreover, as a hypnotic and analgetic in all painful forms of asthma and agrypnia. It is also a valuable aid in the treatment of the morphine habit. Deutsch combined in whooping-cough dionin with creosotal, and secured thereby very notable results. In numerous cases of laryngitis, tracheitis, and bronchitis of children he administered dionin in the following doses: At the end of the first year 1-6 grn., in the second year 1-2 grn., in the third and fourth years 1-2 to 2-3 grn., in the fifth to eighth year 5-6 grn. dionin per 3 1-3 oz. of aqua dest. (1 teaspoonful every three hours), or 1 1-2 grn. dionin per 3 1-3 oz. of syrupi simpl. (1-2 teaspoonful two to three times daily). He invariably found its use to be followed by a prompt alleviation of the cough and improved night rest. In conjunction with creosotal, it is prescribed thus:

Dionin	gr. $\frac{1}{6}$ to iss
Dissolve in	
Syrupi simpl	℥i
Creosot. carbon	gr. xlv.
Ol. amygdal. dulc	gr. cl.
Gummi Arab. pulv	gr. lxxv.
Aq. dest	℥iiiss

Prepare as an emulsion. A teaspoonful to be taken several times daily.

—*E. Merck's Ann. Rpt., XIX.*, 1906.

Hymenolepis Nana and Hymenolepis Diminuta.—Four additional cases of the occurrence of *Hymenolepis nana* to those already reported from the United States are published by W. H. Deaderick, Marianna, Ark. (*Journal A. M. A.*, December 22), and he describes the parasite and the method of its detection. It may require, he says, repeated doses of male fern, the only remedy of value, thoroughly to expel the worms, and they are often difficult of detection in the feces after expulsion. They resemble minute opalescent shreds of mucus and the greatest care is needed to avoid overlooking them. He examined for them in a large, flat baking pan, painted black, with perforations in one end so that the liquid feces could be retained or poured off without agitation. These cases were discovered during an investigation he was making as to the frequency of uncinariasis, and the finding of so many cases in a limited study leads him to think that the parasite may be of more common occurrence than has been generally supposed. He also reports a case of *Hymenolepis diminuta* in a child, the twelfth on record, discovered like the others while searching for the ova of uncinaria.

Clinical Reports, Etc.

TORONTO GENERAL HOSPITAL POST-GRADUATE CLINIC.

THE post-graduate clinic at the Toronto General Hospital on Saturday, April 18th, was conducted by Dr. Graham Chambers. He showed first a case of gout. There was great deformity, resembling arthritis deformans. Part of the deformity results from tophi, and part from thickening of the bone.

The second case was a woman, who complained of insects infesting the scalp. She dates the trouble from a day in which she had made a long wait in a dirty waiting-shed on a wharf. Although first attacking the whole body, she had, she said, been able to eradicate them from all parts but her scalp. Now, however, the insects come down on the body, bite, and then die. The reason she knows they are still present is that when she squeezes the small epidermal scales between her two thumb nails, she hears (or thinks she hears) a cracking noise. Dr. Chambers pointed out that the patient showed certain signs of degeneracy, and drew particular attention to the ridge running along the palate. The patient showed hallucination of ordinary sensation, illusions and delusions. The memory is good and the emotions normal. Her education was fair, the entrance examination having been passed. There was a defective heredity which, the speaker averred, had much to do with the causation.

Two cases of tic were then presented. The first was the ordinary type, of ten years' duration. Treatment: Iron and arsenic; also butyl chloral, gr. vii., with tr. gelsemium, minims x. per dose; the bowels being kept well opened by mistura alba. The patient shows a rather marked increase in spinal pressure—280 mm. instead of 150 mm., the normal.

The second case of tic was a patient who had had the Gasserian ganglia removed, but without cure. The probable reason for this is that other symptoms now show that he has locomotor ataxia—the Argyle Robertson pupil and Rhomberg's sign being present. The neuralgia is possibly only a symptom of the ataxia. If the cause is peripheral a severance of the nerve or obtunding locally by cocaine will relieve the condition. If the lesion is central, this will not occur.

Three hysterical cases were then shown. The first patient, aged 40, had suffered since she was 22. She had never bitten her tongue

in a fit, and does not know whether she is unconscious during one or not. An attack is brought on by any excitement, and usually by pressure on the big toe of her right foot. This was tried in the clinic, but did not cause any convulsion.

The second case was of three years' duration, having spent some time in the neurasthenic wards, with temporary recovery. A week since she returned to the general wards in a lethargic condition. She complained of great pain in the head and back, and showed much emotional disturbance. She has also relative anesthetic areas, is very suggestible, and craves for sympathy. These patients have defective will-power, show vasomotor disturbances and perversion of functions. Dr. Chambers seeks, in all these cases, to determine the psychological condition, and then tries to correct the deficiency. A great factor in the cure is suggestion, and that by discipline, particularly in young people. The performance of lumbar puncture to ascertain the spinal pressure has relieved the pains complained of in the back and head in two of these cases. A case of hysterical vomiting will be relieved by lavage of the stomach.

The patient requires to be re-educated. The holding-out of a prospect of cure, and the explanation of the condition to the patient, will be of benefit.

Another patient shown, a girl, had a contracted field of vision, paralyses and nearly all the stigmata of hysteria. Another patient had an hysterical shoulder, the pain in the joint being worse during the daytime. Under anesthesia, there were no indications of joint disease. Two of the cases exhibited showed the pathological palate. It must be remembered, however, that these palates may be due to adenoids.

In one of the leading medical centres in the United States, where psycho-therapy is much resorted to in these cases, a close analysis is made of the mental condition, the patient is taken into confidence, the condition explained, and their re-education undertaken.

A patient suffering from gastric ulcer was next presented. The pain complained of was seated some three inches higher than the usual spot—the end of the ensiform cartilage. After admission, there were two hemorrhages. Rectal nutrients were commenced about twelve hours after the bleeding. Twelve enemas a day are given—four nutrients, four salines and four cleansing. On the first day a cleansing, an hour after a nutrient, three hours after a saline. The rectum will stand this for about a week. In the patient shown it had been kept up eleven days. The nutrient enemas consist of yolk of eggs, milk, sugar, and frequently a little starch as an emollient. Glucose is absorbed very readily—about nine-tenths of the amount given. Of fats only about one-third

is absorbed, and of albumen about one-sixth. It is unwise to use too much proteid: the proteids are irritating. High nutrients are inadvisable, because they stimulate gastric secretion too much, something one must avoid. Peptones are very irritating. Pancreatin may be used.

After a week food may be given by stomach. In the case shown, gruels, made with water, were administered. Most men use milk.

The next case was that of a male patient, aged 55, with malignant disease of the stomach. A history of the use of alcohol in excess was given. This was accompanied by hyperchlorhydria and acid catarrh. Twelve years ago gastric hemorrhage ensued. This was frequently the previous history of these cases of gastric cancer. The growth was quite palpable. There was marked tenderness. The liver was somewhat enlarged, and jaundice was marked during the last two weeks, due probably to an enlarged lymph gland in the fissure of the liver. Hydrochloric acid (both free and combined) and lactic acid absent.

A man with rodent ulcer of the orbit was next shown. Dr. Chambers recalled several cases of this disease he had seen recently where no ulceration was present. He gave blackboard illustrations, showing the progress of rodent ulcers, calling particular attention to the edges, which should be scraped off before giving the X-ray treatment.

The next case was that of a young man with tubercular peritonitis, and with fluid in both pleural cavities. Calmette's reaction was positive. The temperature has been up to 104, with a hectic appearance. Treatment: Fresh air. Operative procedure in these cases on the peritoneum is helpful, more particularly in mixed infections. J. N. E. B.

Laryngology, Rhinology and Otology

IN CHARGE OF
PERRY G. GOLDSMITH, M. D
TORONTO.

THE RULE OF SYNCOPE IN HEMOPTYSIS.

Dr. Bosviel (Parisian Society of L. O. & R., November, 1907), after tonsillotomy made by himself with a cold snare in an adult, found an abundant arterial hemorrhage from the inferior part of the anterior pilar. The hemorrhage resisted all the ordinary means employed, and only stopped at the end of four hours, when syncope came on. He draws the conclusion that tonsillotomy with a cold snare ought to be carried out with slowness, lasting a minute and a half, and that in severe hemorrhage it is better to welcome syncope than to fear it.

MASTOIDITIS AND DIABETES.

Dr. Furet (Parisian Society L. O. & R.) narrated notes of five genuine diabetic cases affected with mastoiditis following acute suppurative otitis. The five patients were operated on and cured. One of them appeared to have become diabetic in the thirty-six hours following operation, as if the operative traumatism had determined its occurrence. Dr. Furet had not followed any special rules as regards the operative proceedings. After having opened the antrum he was guided by the lesions he found. The sequelæ of the operation were very simple and call for no particular mention.

PROTECTIVE SPRAYS IN NOSE AND THROAT WORK.

Many of the bleached or white fluid cosmolins and vaselines for sale on the market are bland and unirritating, while others are very sensitive to mucous membranes. The surgeon should assure himself of the bland and unirritating qualities of such preparations before using them in his office practice or prescribing them for the use of his patients. Certain gums and camphors, nearly insoluble

in water, may be dissolved in fluid vaseline or alboline, and used with advantage as applications to mucous membranes. Probably the most useful of such substances are menthol and camphor. Menthol and camphor, 10 grains of each to the ounce of liquid vaseline, is sedative and slightly astringent. (Many mucous membranes cannot tolerate more than half this strength.) A solution of menthol and oil, 10 grains to the ounce, produces at first a sensation of irritation, followed by decided sedative effects and a sensation of cold, but analgesic in acute coryza are decided. Frontal headache, as a result of a cold in the head, is promptly relieved by spraying the nasal mucous membrane with this formula. Camphor and menthol, with or without a small amount of eucalyptol or oil of pine, is a very useful combination for injection through a catheter into the middle ear.—*Gleason.*

Dr. Percy Jakins (*Journal of Laryngology*, January, 1908) details the notes of a very interesting case.

Patient 19 years of age, and suffered from a chronic discharge of the left ear for two years. A sinus was present over the left mastoid of fourteen days' duration. Sixteen years previously a mastoid operation had been performed. Patient was not particularly ill, but had a considerable amount of tenderness over the mastoid region. He had tubercular disease of the left knee, and had wasting of the muscles of the calf of that leg. A complete radical mastoid operation was performed, and very extensive caries of the antrum and attic was demonstrated. The lateral sinus was exposed, and also the middle cerebral fossa. The morning after the operation the temperature rose to 101, and gradually fell for the next week, when it again rose to 101 and then to 102. The patient now had a slight rigor and vomited twice, also constant headache. The sinus was then opened, and it was expected to find a thrombus. The vein, however, was quite healthy and pulsating. A markedly fluctuating temperature took place for the next few days, varying from 99 to 102. Three weeks after the operation, when the temperature had risen to 103, lumbar puncture was performed and 15 c.c. of cerebro-spinal fluid was removed under moderate pressure. This fluid, which was examined by Dr. Wyatt Wingrave, contained a gram staining diplococcus, but no tubercular bacilli. The presence of a large number of leucocytes clearly indicated an acute meningitis. The case recovered with only a slight rise of temperature subsequent to the lumbar puncture, and rapidly regained capital health. P. G. G.

The Canadian Journal of Medicine and Surgery

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Editorials.

A MODEL MILK SUPPLY.

CHICAGO is determined to have a milk supply which shall be as free as possible from disease-producing defects. On and after May 1st, 1908, the beginning of the new license year, a license to sell milk will not be issued by the Chicago Health Department to any person whose premises are insanitary, or to any person or firm whose past record is bad.

The Chicago Health Department has begun the testing of all milch cows within the city limits for tuberculosis. The use or sale of milk from a tuberculous cow is strictly prohibited. Permission to keep a cow will be cancelled if the owner's premises are not kept clean, if manure is allowed to accumulate, if flies breed or congregate therein, or if the place becomes or is allowed to become a nuisance.

The Department of Health is analyzing the well water of all farms from which milk is sent to Chicago. Up to April 18, 1908, more than twenty wells had been condemned, and notice served on the owners that new wells must be dug, or, in the event of failure to comply with this regulation, their milk will be excluded from the city. The water of the condemned wells, in every instance, showed marked evidence of contamination.

Every dairy farmer is instructed to send to the Department of Health, on the 1st and 15th days of each month, a written report, stating the presence or absence of contagious disease on his premises. If such notice is not received in due time, the milk supply from dairies failing to report will be regarded as suspicious, and will be excluded from the Chicago market until an investigation can be made.

It is believed that the farmer will make correct reports concerning the presence or absence of contagious diseases, when he is compelled to place himself on record in this manner.

These regulations are well framed to secure the desired ends—a healthful milk supply and the prevention of the extension of contagious diseases through milk.

It is very satisfactory to know that the application of the tuberculin test to dairy cows will provide for the elimination of tubercular animals from the dairy herds, and against the probable extension of tuberculosis to man.

Rigorous as the law appears to be, its enforcement will vastly improve the well-being of dairy cattle. The Chicago dairyman will have to go further than selling his tubercular cattle to the butcher. He will have to purchase tested cattle, in the first place, and he will have to treat his cattle in such ways that they will not develop tuberculosis. That is to say, he must let them live a natural, instead of an artificial life, and he must feed them on food adapted to their physiological as opposed to the commercial

necessities. To secure these essentials, dairy cattle must receive an unlimited supply of fresh air, and must not be shut up in unventilated byres, where they constantly breathe a vitiated atmosphere. Neither must they be fed on mush, in which the indispensable elements have been destroyed by boiling. Feeding cattle with brewery grains, we are pleased to see, is strictly forbidden in Chicago dairies. Cattle are not constituted to live and thrive on cooked food, and when such food is used one of the results is diseased milk. J. J. C.

VARSITY VERSUS HOSPITAL.

"But there's someone always kicking
In the Land of Heap Too Good."

According to the correspondence department and the editorial overflow columns in our daily press, the old hen has refused to gather all her brood under her wings, because some of the chickens are ducks. In other words, the University of Toronto, as a University, is not properly represented on the new Hospital Staff, so someone says; another remarks that every second man on the staff is attached in some capacity to the University. Someone else states that the University gave a grant with the understanding that it should have proper representation and special opportunity for clinical work. The reply is voiced by a member of the Board that the money given as a grant by Varsity was given to that institution by the Government out of the Succession Dues from estates, which dues should have been paid directly toward the "maintenance of hospitals and other charitable institutions." So the pros and cons go to and fro, and the interest deepens as the puzzle of reserved seat coupons twice sold diverts the attention of the audience from the larger interest of the Building drama.

We are told that the personnel of the actors will be changed every two years. If so, why not let old Father Time adjust all differences, and in the meantime keep the curtain down and let stage whispers prevail during the setting—and then, amid the unanimous plaudits of pit and gallery, let the play end, as all plays should, with the survival of the fittest. W. A. Y.

HOW DOES ALCOHOL PRODUCE TUBERCULOSIS?

That alcohol produces tuberculosis is acknowledged by some medical writers; the method by which it produces it deserves elucidation. In an address, delivered at Dublin, Ireland, October 11th, 1907, Dr. Osler expressed the opinion that alcohol is one of the agents which produce an excessive tubercular mortality in Ireland. In his "Practice of Medicine," 6th edition, p. 371, Dr. Osler writes: "It was formerly thought that alcohol was in some way antagonistic to tubercular disease: but the observations of late years indicate clearly that the reverse is the case, and that chronic drinkers are much more liable to both acute and pulmonary tuberculosis. It is probably altogether a question of altered tissue-soil, the alcohol lowering the vitality and enabling the bacilli more readily to develop and grow."

In "L'Alcohol et L'Alcoholisme," p. 167, a work written by Drs. Triboulet and Mathieu, and published in 1900, a physiological explanation is given of the means by which alcohol hurts the tissues of the chronic drinker. "In all cases, alcohols and essences (absinthe, etc.), on the one hand, by diminishing organic combustion in the living tissues, on the other hand, by their elimination through the lungs, create simultaneously a general predisposition, as well as a local one, which provide for the bacilli tuberculosis a tissue-soil suitable for their development." It is also shown in the same work that the phthisis of chronic drinkers presents peculiar characteristics of its own, both in its localization and in its evolution. Differing altogether from classic data, in which tubercular invasion of the lungs is described as appearing in the front portion of the apex of the left lung, the phthisis of the chronic drinker is located in the back portion of the apex of the right lung, in the form of granulations, which produce diminished elasticity on percussion. An attack of hemoptysis may give the first inkling of the lung lesion, and the disease then lessens in violence. If, at this stage, the chronic drinker has the good sense to renounce his bad habits, give up alcohol and take proper food, he may, in most cases, recover his health. Unfortunately, it rarely turns out this way. A second and a third attack supervene, and the drinker's

phthisis, which at first caused but little trouble, assumes dangerous proportions, owing to the extension and dissemination of tubercles. In some cases of alcoholism, tubercles invade, concurrently, the lungs, the peritoneum, the meninges of the brain, and cause death rapidly. In France, such results occur principally among market porters, coopers and draymen, who are exposed to the excessive use of alcohol on account of their occupations.

It would be of immense benefit to the public health if physicians, particularly the younger members of our profession, were to form definite views about the effects of alcohol on individuals, both in health and in disease. The public has changed the point of view as regards alcohol. It no longer looks at it from the point of view of the pulpit or the philanthropist, but from the point of view of the educated physician. The physician, being the private adviser of the family, and in some cases the official adviser of the people, should be perfectly clear in his own mind, and irreproachable in his own conduct as to the effects of the beverage use of alcohol. Vested interests, though powerful, individual preferences, though not inconsiderable, should have little weight in deciding the question: Is alcohol a menace to the family and the nation? If it is so, let it go. J. J. C.

A VINDICATION.

Again, just ere going to press, we feel bound in justice to one (although personally unknown to us) to refer to an unfortunate subject long enough to offer a word of congratulation to Dr. A. G. Ashton Fletcher upon his happy release from the suspicion of the law courts and the condemnation of the people's tongues who glory in wagging on the evils of our times.

Our noble profession contains as a whole a class of fine, upright men, who hold its honor dear, and it is a relief to all to know that from the name of even an obscure member of the great whole a foul blot of unmerited disgrace has been removed. Discussed, as this case has been in the lay press, far and wide, it has brought the whole medical profession into the detestable limelight, and endeavored to put it under the ban of ignorant calumny. As a whole the profession has nothing to do with an individual case, but, to their credit let it be known that they have shown their belief, by many

strong words, in a man's innocence until proven guilty. It would, indeed, be a mean spirit and a contemptible fraternity whose

"only aim was to keep afloat,
While a brother may drown with a cry in his throat."

W. A. Y.

THE PREVENTION OF CANCER IN CANADA.

We do not know of any public efforts to prevent cancer in Canada. The Provincial Boards of Health issue printed instructions to the public, showing the precautions necessary to prevent the catching of tuberculosis. Philanthropists and preachers urge the people to war against the curse of alcoholism. No aid, in the way of published advice to the people, is given to prevent the access of cancer, or stay the work of that destroyer.

In Germany, the struggle against cancer is openly made in newspapers and scientific journals. Physicians and midwives, whom the people consult for their bodily ailments, are strongly urged to make complete clinical examinations of the patients. If cancer is suspected or discovered. the benefits derivable from an early operation are urged.

In a statistic of cancer of the uterus, published by Winter, of Konigsberg, that surgeon urges the reasons why cancer is so rarely cured. Of 404 women affected with cancer of the womb, 253 sought advice at an early date: of 380 physicians consulted in cases of cancer of the womb, *57 did not make a digital examination;* 14.6 per cent. of the patients consulted midwives. Of 1,062 women affected with cancer of the womb, only 135 consulted physicians during the first month of illness, 283 waited for three months, 118 six months, 126 nine months, 81 one year. All the facts in connection with the successful treatment of cancer point to the benefit to be derived from an early operation. To physicians, this is a truism; but the public should be told of it. Any legitimate means by which sufferers from cancer, many of whom are women, can be induced to consult physicians at an early date will accomplish the best results for the patients, and will strengthen the position of operative surgery.

There is no cancer hospital in Canada, operations for cancer

being done in general hospitals. Statistics would seem to show that there is room for a special hospital for malignant diseases. According to the Canadian decennial census of 1901, the cancer mortality of Canada was 42.11 per 100,000 of population. The cancer mortality of Ontario for 1905 was 55.42 per 100,000 of population. Thus we see that many lives are destroyed every year by cancer, not in childhood, early youth or young adult life, as by tuberculosis, but at the period of mature intellectual and physical vigor.

Some cancer patients from Canada find their way to the cancer hospitals of the United States. At New York, there is the General Memorial Hospital for the Treatment of Cancer and Allied Diseases, a magnificent public charity, founded by private benevolence, at an outlay of $1,000,000. St. Louis possesses the Hospital for Cancer and Skin Diseases; Philadelphia has the Oncological Hospital. At all these hospitals research work is prosecuted. Research work in cancer is also done by the Harvard School of Medicine, the task being in charge of the Caroline Brewer Croft Fund Cancer Commission, which has now issued its fourth report. Buffalo, our neighbor, has a good laboratory, devoted exclusively to the study of tumors, under the charge of Drs. Roswell Park and Gaylord. There are doubtless other schools and laboratories in the United States, in which cancer research work is carried on.

It would be a good thing if a committee of the Toronto Academy of Medicine would take up this life-saving specialty. The Pathological Section might, on its own initiative, or, preferably, in co-operation with the Ontario Board of Health, issue circulars to physicians, asking for the number of their cancer patients, so that data might be compiled for a statistic, showing the actual amount of cancer among human beings in this Province.

The circular would serve as a gentle reminder. When physicians become more thorough in their methods of examining female patients, operable cases of cancer will multiply in Canada, as they have multiplied in Germany. If the investigation of cancer is once started in Ontario, other methods of reaching the public will doubtless suggest themselves to the committee which will undertake the work. J. J. C.

EDITORIAL NOTES.

Sleeping Sickness Caused by Glossina Palpalis.—Colonel Prince, F.R.S., who is regarded as one of the most earnest and original investigators of the nature and causes of obscure tropical diseases, delivered a lecture on Sleeping Sickness, March 18, 1908, before the members of the African Society at the Royal United Service Institution, London, England. He said, among other things, that this disease was carried by the tsetse fly (*Glossina palpalis*), and that there was no proof that it could be carried by any other tsetse fly. In discussing preventive measures, he said it was best to remove the natives from the region of the fly, the habitat of which was on the lake shores, where there were clear water, rivers and forests. It was there that the natives gathered in large numbers, and the conditions for the spread of the disease in the Sleeping Sickness area were as favorable as they could possibly be. Many attempts had been made to discover a drug that would cure man of the disease created by the trypanosomes, or render him immune to the attack of the parasite. Arsenic had held its own as probably the most useful one in this malady. At first it was used in the form of arsenious acid, dissolved in an alkaline solution; but, later, other preparations, such as atoxyl and orpiment had been experimented with. Some of the experiments, in the cases of the lower animals, had been followed by a complete cure, but, up to the present time, there was no single instance of a well-authenticated cure having been effected in man, although thousands of cases had been treated. The effect of the treatment was often marvellous, the patient regaining the appearance of health in a very short time, but, eventually, the trypanosomes returned to the blood and the patient died. All attempts to render man immune to the trypanosomes by some antitoxic serum, or vaccine, had been fruitless, and there did not seem to be any likelihood of anything being found out in that direction for a long time to come.

To Secure Safety in Administering Chloroform.—W. H. Horne, Fleet Surgeon (*British Medical Journal,* April 4, 1908, p. 840), attributes his success in administering chloroform to two circumstances: (1) To securing complete anesthesia as quickly as possible, in order to avoid vomiting and its dangers. (2) To prevent the

patient's tongue from falling backwards against the posterior wall of the pharynx. To secure complete anesthesia he gives plenty of chloroform; to prevent swallowing of the tongue, he puts a couple of pillows beneath the patient's shoulders, in order that the head may hang right back. When suffocation occurs, he hooks forward the root of the tongue by placing one or two fingers in the pharynx. The fingers are insinuated well behind the tongue, which is lifted forward and then there is generally a crowing respiration, which shows at once that all is well. Mr. Home does not approve of the use of the tongue forceps. If applied to the tip of the tongue when its base has got wedged in the pharynx, the forceps is apt to stretch the tongue and give the anesthetist an erroneous impression that everything possible has been done. Regarding the tongue forceps Dr. E. Lanphear writes in *Surgical Therapeutics*: "The man who wants to use a tongue forceps is one never worthy of trust as an anesthetist. In extreme cases a finger wrapped in gauze may have to be inserted into the throat to unroll the tongue, but it should not be once in a thousand cases; in all others elevation of the jaw is all that is required. The patient's chin is raised by placing a thumb on each side of the face, above the angle of the jaw, and three fingers on the neck, below the angle, when, by pushing upwards and forwards, the larynx will be straightened and the tongue drawn forward out of the pharynx."

The Feeble-Minded in Ontario.—Dr. Helen MacMurchy, who at the request of the Provincial Secretary, continued her investigations into the condition of feeble-minded persons in Ontario, gives her opinions on this subject in a second report, recently issued by the Provincial Government. The report is lengthy (31 pages), but is interesting and instructive. It appears that, besides feeble-minded children or young persons living at home, there were in Ontario, January 31, 1908, 612 feeble-minded persons distributed among charitable institutions, county houses of refuge, jails, the Andrew Mercer Reformatory and the Orillia Asylum for Idiots. Their maintenance cost $50.124.85, and, at present, there is no return for this expenditure. If properly trained in a special institution, feeble-minded persons could do remunerative work, viz., laundry work, gardening and the care of conservatories, dairying, the work of the institution itself, sewing, lace making, weaving, basket making, etc. Instruction should be begun at 6 years of age

and feeble-minded children should be separated from normal children as soon as possible. A medical inspection of schools would definitely settle the number of feeble-minded children in Ontario and should, therefore, be the first step towards providing the special training and care which feeble-minded children require. Reference is made in the report to the care of the feeble-minded in England, and descriptions are given of visits made to the Starcross Institution (Western Counties Asylum) and the Sandlebridge Schools (Lancaster and Cheshire Society for the permanent care of the Feeble-minded). It is noted that observation by the After-Care Committees, who look after the scholars trained at these English schools, shows that trained feeble-minded persons are unable to make a living if left to their own resources, and that they require supervision all their lives; the care of the feeble-minded must be a permanent care. Considerable stress is laid on the importance of preventing the procreation of fresh imbeciles, by confining male and female feeble-minded persons in an institution. Dr. MacMurchy makes out a good case for the establishment in Ontario of a school for the training and subsequent care of feeble-minded persons.

A Chemical Test for Functional Albuminuria.—In functional albuminuria, Sir A. E. Wright noted a lessened coagulability of the blood, causing diminished viscidity. Calcium salts reduce the coagulation-time and increase the viscidity of the blood. He found that calcium salts would control functional albuminuria, whereas, through their operation, organic albuminuria would not be diminished and might be increased. The subjects of functional albuminuria have often been growing rapidly, so that there is an extra demand for calcium on the part of the tissues. He, therefore, considered this condition hematogenous in origin and allied to a serous exudate, such as occurs in urticaria. Fifteen grains of calcium lactate, given three times a day in water, should control the albumen in such cases. Dr. Langdon Brown (The Clinical Observer), observed that the administration of calcium lactate controlled the albumen in our cases of functional albuminuria, whereas in organic albuminuria there was no effect. Dr. Hingston Fox tried this salt in seven cases, which he thought were functional, and in all the albuminuria ceased, whereas in nine cases, apparently organic, the albuminuria persisted. This action of lactate of calcium may be of great importance in relation to examinations for life insurance. It seems

that so simple a test should be applied before an adverse decision is given in cases of albuminuria. The general practitioner who knows the condition of a patient about to stand the test may fortify him against the ordeal by the administration of calcium lactate. In doing so he will be unable to secure the acceptance of persons affected with organic nephritis, but only of those who will almost certainly be free from albuminuria when adolescence is past. It is noted in *The Prescriber* that calcium lactate cannot be administered as tablets or powders, since, though soluble in water when freshly prepared, it soon becomes insoluble. The best method of giving it is in solution, as follows:

R	Precipitated calcium carbonate	℥ j
	Lactic acid	gr. cxxx
	Water enough to make	℥ vi

Solve.—One tablespoonful contains fifteen grains of calcium lactate.

J. J. C.

PERSONAL.

Dr. E. Stanley Ryerson begs to announce to the profession that after May first, nineteen hundred and eight, he will devote himself to the practice of surgery.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

THE NEW VITAL STATISTICS ACT OF ONTARIO.

J. J. Cassidy, M.D., Editor Canadian Journal of Medicine and Surgery:

Dear Doctor,—I have much pleasure in enclosing herewith an outlined memo., *re* the "Vital Statistics Act," which will be of interest to the medical profession of this Province.

The amended Act will, it is hoped, facilitate the collection of vital statistics, and be useful to the public in permitting of the registration of, more particularly, deaths, and also enable them to secure more readily than has heretofore been possible certificates of either births, deaths, or marriages of recent date.

The provisions of the Act have been extended to the Indian districts, they being deemed territories, and the Div.-Registrar of the same, appointed by Order-in-Council, being paid for his services in a formal manner, as has heretofore been the custom in the unorganized portions of the Province.

Much confusion has existed in the past in reference to definition of a search. This, according to section 7, sub-section 4A, refers to one county or district, covering a period of not more than three years, the fee for searching being 25 cents; while, for a search for one registration, extending beyond one county, or for more than three years, the maximum fee is placed at $2.00. The fee for a certificate, as issued by the Registrar-General (which is prima-facie evidence in any court), is 50 cents, the same as heretofore.

Duties of Div.-Registrars.—The officers will now be provided with schedules, in duplicate, of Births, Marriages and Deaths, and returns have to be made to the Registrar-General on or before the fifteenth days of January, April, July and October, and not half-yearly as heretofore, together with original returns as received from clergymen, physicians and householders. According to sub-section 6 of section 11, if a Div.-Registrar has reason to believe that any birth, marriage or death has not been registered, it is now his duty to inform the proper person, and on failure of such person to make the registration, information has to be sent forthwith to the Inspector of Vital Statistics.

For the convenience of the public, the Div.-Registrar, upon application and upon payment of a fee of 25 cents, shall give a certificate in the prescribed form, which has not been included in

any quarterly return made to the Registrar-General; and the statute distinctly states that the fee is for the personal use of the Div.-Registrar issuing the same.

Section 14 provides that every legal medical practitioner who attends at the birth of a child, shall forthwith give notice on the prescribed form to the Div.-Registrar. And section 22 provides that the duly qualified medical practitioner last in attendance during the last illness of a person who dies shall, before interment, supply to the Div.-Registrar all the particulars required to be registered of such and such death; and in order that there may be no uncertainty as to these requirements on the part of medical practitioners, when other parties notify of either a birth or death, sub-section 3 of section 31 provides that in no case is the doctor relieved of these responsibilities; and it is the intention of the department to enforce these two important provisions.

The notification of a birth, section 15, is given by:

(a) The father, if living; or

(b) In case of his inability, or if he is dead, by the mother, if living.

(c) In case of the inability of both parents, or if neither be living, by the person standing in the place of the parents of the child.

(d) If neither of these can notify, then by the occupier of the house in which the child was born, if he has knowledge of the birth, and by the nurse or midwife present at the birth.

These notices to be given within thirty days after date of birth. And in the case of a new-born child, found exposed, it is the duty of any person finding such child to register such information as is required with the Div.-Registrar.

Section 20 provides for the altering or inserting of a name after the registration of a birth has been made, up to a period of ten years after the occurrence of the same.

As to the notification of a death, the order is as follows:

Section 22.—The occupier of a house in which a person dies, or if the occupier be the person who has died, then every adult person residing in the house in which the death took place. Where a death does not take place in a house, then every person present at the death, or having any knowledge of the circumstances, or the Coroner who views the body.

In order to facilitate interment of the dead, sub-section 2 of section 22 provides that, where the death has occurred in a township or territory without municipal organization, the return may be made to the nearest Div.-Registrar, who, upon the payment of a fee of 25 cents, *shall register the same and issue a certificate of registration of death*, the fee in this case being for the personal use of the Div.-Registrar. And where the duly authorized Div.-

Registrars are remote from any particular section of the Province, the Registrar-General, upon proper presentation of the facts, may appoint Sub-Registrars for the purpose of issuing certificates of registration of death. The fee being paid by the applicant, the Sub-Registrar must make his return direct to the Div.-Registrar of the district in which the death occurred, and to the Registrar-General.

A very important amendment is that contained in section 25. The first part reads as follows: "The removal for burial or the embalming of any body shall not take place, and an undertaker, clergyman, sexton, householder or other person shall not engage in the burial of a body unless a certificate of registration has been previously obtained from the Div.-Registrar. The importance of this in criminal cases is quite evident to the medical profession.

Under section 27, caretakers, owners of cemeteries or burying grounds are required to transmit to the Div.-Registrar of the division in which the cemetery is situated, quarterly returns, which are subsequently transmitted by that officer to the Registrar-General.

Yours truly,

C. A. Hodgetts.

Deputy Registrar-General.

Toronto, May 12th, 1908.

News of the Month.

CANADIAN MEDICAL ASSOCIATION.

The 41st Annual Meeting of the Canadian Medical Association opens at Ottawa on the 9th inst. and continues in session on the 10th and 11th, under the Presidency of Dr. F. Montizambert, Ottawa.

The opportunity to visit the Capital when Parliament is in Session presents itself for the first time in the history of the Canadian Medical Association. The Forty-first Annual Meeting is the first under the New Constitution. Come and help consolidate the profession all over Canada, and get better acquainted with the Canadian Medical Association and also with the Canadian Medical Protective Association.

The standard certificate plan prevails in every Province, no one requiring any certificate from the General Secretary. This means that all delegates, on purchasing single first-class tickets to Ottawa, for themselves, their wives and their daughters (no others) should ask for, and get, at the same time a standard convention certificate from the ticket agent for each. These should be left with the Treasurer when registering, to facilitate the signing and returning of same by the General Secretary. When signed they will entitle the holder thereof to reduced transportation, which in all cases must be arranged for at Ottawa. If three hundred are present holding these certificates, all will be returned home free; one-third rate if fifty are present with certificates.

The Canadian Pacific Railway, the Grand Trunk Railway, the Intercolonial Railway, the Canadian Northern Railway, the Richelieu and Ontario Navigation Company, and all lines in the Eastern Canadian Passenger Association, are included in the transportation arrangements.

Delegates from points west of Fort William will be permitted to use the Upper Lake Route, Fort William to Owen Sound, or *vice versa*, on extra payment of $4.25 one way, or $8.50 both ways, when travelling on the standard certificate plan.

Tickets will be on sale in the Eastern Canadian Passenger Association territory—Fort William to Halifax—three days before the first day, Sunday not counted a day, and three days' final return limit after the last day, Sunday not counted. If through ticket cannot be purchased at starting point, purchase to the nearest point where such through ticket can be obtained, and there purchase through to place of meeting, requesting a standard certificate.

West of Port Arthur, tickets will be on sale—Port Arthur to Moose Jaw—June 5th to 8th; west of Moose Jaw to Laggan and Coleman, June 4th to 7th; all certificates to be honored for return journey up to July 9th, 1908.

The meeting place will be St. George's Parish Church Hall, Metcalfe St.—the business hall is just opposite—The Racquet Court. Sectional meetings will be held in Carnegie Library near by.

A special agent from the Eastern Canadian Passenger Association will be in attendance on June 10th to vise the Standard Convention Certificates. Each delegate must pay this officer a fee of twenty-five cents for vising same.

Delegates desiring to have hotel or lodgings reserved for them should apply to the hotels below, or to Dr. F. W. McKinnon, Elgin St., Ottawa:

Russell House—American Plan.....	$3 00	to	$5 00	per day
European Plan.....	2 00	to	3 00	"
Windsor Hotel—American Plan....	2 00	to	3 00	"
Grand Union Hotel—American Plan	2 00	to	3 00	"
Cecil Hotel—American Plan.....	3 00			"
Alexandra Hotel—American Plan...	2 50			"
European Plan...	1 50			"

The fee for membership remains this year at $2.00. It is payable to the Treasurer, Dr. H. Beaumont Small, Ottawa, at the time of registering. Those desiring to become members for the first time should get information as to procedure from the General Secretary. Transportation rates apply to them as to members.

On the first afternoon at 5 p.m. there is to be a reception, by local members, at the Ottawa Golf Club, Aylmer, P.Q.; on the evening of the first day a civic reception at the Carnegie Library. During the second day there is to be an excursion to Caledonia Springs; on the evening of the third day a Smoking Concert. The ladies of Ottawa will entertain the visiting ladies. There will be a visit to the laboratory at the Experimental Farm.

The Annual Meeting of this Association will take place at 12 a.m., June 9th; Dr. R. W. Powell, Ottawa, the President, will have a splendid report to present. The great success of this Association should encourage all Canadian practitioners to become members.

This year the Military Surgeons, under the Presidency of Dr. G. Sterling Ryerson, Toronto, meet as a section of the Canadian Medical Association.

Additional information of a local character may be obtained from the local Secretary, Dr. Wm. Hackney, 396 Somerset St., Ottawa. Any general information from the General Secretary, Dr. George Elliott, 203 Beverley St., Toronto.

PROVISIONAL PROGRAMME.

Presidential Address—Dr. F. Montizambert, Ottawa.

Address in Medicine—Dr. Risien Russell, London, England.

Address in Surgery—The Surgical Rights of the Public—Dr. John C. Munro, Boston, Mass.

MEDICAL SECTION.

Dr. John T. Fotheringham, Toronto, Chairman; Dr. Alex. J. MacKenzie, Toronto, Secretary.

Our Experience in Broncho-Pneumonia—Dr. C. S. McVicar, Hospital for Sick Children, Toronto.

The Differential Diagnosis of Some Forms of Mental Disease and a Note as to Treatment—Dr. G. J. Fitzgerald, Toronto.

Out-Patients' Clinics for the Tuberculous Poor—Dr. Harold C. Parsons, Toronto.

On the Choice of a Climate—Dr. Geo. D. Porter, Toronto.

Hæmoptysis in Pulmonary Consumption—Dr. J. H. Elliott, Toronto.

Spina Bifida Associated with Syringo Myelia—Dr. Colin D. Russel, Montreal.

Meningitis—Dr. A. E. Ranney, North Bay.

Some Interesting Complications of Pulmonary Tuberculosis and Their Treatment—Dr. J. K. M. Gordon, Gravenhurst.

Ergot—Drs. E. V. Henderson and W. H. Cronyn, Toronto.

Some Unusual Cases of Rheumatism—Dr. A. McPhedran, Toronto.

What Shall We Say to Our Neurasthenic Patients?—Dr. G. S. Young, Prescott.

Pernicious Anemia, Report of Cases in Country Practice—Dr. James Baird, Hemmingford, Quebec.

Some Further Observations on Pneumo-Thorax—Dr. W. F. Hamilton, Montreal.

Myo-Cardial Change in Valvular Disease—Dr. H. B. Anderson, Toronto.

SURGICAL SECTION.

Dr. Geo. E. Armstrong, Montreal, Chairman; Dr. Edward W. Archibald, Montreal, Secretary.

Title to be announced—Dr. James Bell, Montreal.

Congenital Pyloric Obstruction—Dr. F. J. Shepherd, Montreal.

Temporary Colostomy as a Curative Agent in Post-Operative Fæcal Fistula of the Colon—Dr. J. M. Elder, Montreal.

The Administration of the General Anesthetic from the standpoint of the Operator—Dr. H. A. Beatty, Toronto.

Reports of Two Large Abdominal Tumors with Remarks—Dr. A. B. Atherton, Fredericton, N.B.

Title to be announced—Dr. A. Primrose, Toronto.

Diagnosis and Treatment of Ureteral Calculus, accompanied by Case Reports—Dr. A. E. Garrow, Montreal.

Exhibition of Cases to Show Result of Operations Reported at the London Meeting, 1903. Advanced Hip-Joint without Shortening—Dr. R. P. Robinson, Ottawa.

Calculus of Ureter Removed per Vaginam—Dr. Walter McKeown, Toronto.

Combined Medical and Surgical Section.

Discussion on General Peritonitis.

Carcinoma of the Buccal Cavity, Etiology and Treatment—Dr. A. R. Robinson, New York.

Subdural Hemorrhage and Its Surgical Treatment—Dr. E. W. Archibald, Montreal.

On the Use of the Ortho-Diagraph in Medicine—Dr. Robert Wilson, Montreal.

Public Health Section.

Dr. Chas. A. Hodgetts, Toronto, Chairman; Dr. Robert Law, Ottawa, Secretary.

Address by the Chairman, Dr. Hodgetts.

Title to be announced—Prof. Starkey, Montreal.

Title to be announced—Dr. J. D. Lafferty, Calgary.

Title to be announced—Dr. Seymour, Edmonton.

The Medical Inspection of Schools—Dr. John Hunter, Toronto.

Laboratory Workers.

Dr. W. T. Connell, Kingston, Chairman; Dr. A. R. B. Williamson, Kingston, Secretary.

Anesthesia in Laboratory Work—Dr. V. E. Henderson, Toronto.

Chorion Epithelioma in the Testis—Dr. C. B. Keenan, Montreal.

A Criticism of the Ammonium Nitro-Molybdate Method of Detecting Organic Phosphorus in the Tissues—Geo. G. Nasmyth, M.A., Ph.D., and E. Fidler, B.A., M.B., Toronto.

The Bio-Chemical Characteristics of Bacillus Influenzæ—Dr. Handford McKee, Montreal.

Title to be announced—Prof. J. George Adami, Montreal.

Title to be announced—Prof. J. J. Mackenzie, Toronto.

Title to be announced—Dr. C. W. Duval, Montreal.

Contribution to the Pathology of Tumors of the Lung—Three cases of Sarcoma: (1) Primary, (2) Secondary—Dr. E. St. Jacques, Montreal.

On the Technique of the Study of Complement Deviation—Dr. A. H. U. Caulfeild, Toronto.

Combined Public Health and Laboratory Workers.

Water Supplies and Water Analysis—Dr. J. A. Amyot, Toronto; Dr. T. A. Starkey, Montreal; Dr. Gordon Bell, Winnipeg; Dr. W. T. Connell, Kingston; and others will contribute to this discussion.

Section on Eye, Ear, Nose and Throat.

Dr. H. S. Birkett, Montreal, Chairman; Dr. Handford McKee, Montreal, Secretary.

New Therapeutic Notes—Dr. Wilfrid Beaupre, Quebec.

Title to be announced—Dr. G. H. Mathewson, Montreal.

Title to be announced—Dr. Roy, Quebec.

Some Points in the Technique of Sub-mucous Resection of the Nasal Septum—Dr. C. M. Stewart, Ottawa.

Ulceration of the Cornea, Etiology and Treatment—Dr. Handford McKee, Montreal.

(1) Calcified Fibroma of the Orbit; (2) A Case of Bilateral Lardaceous Infiltration of the Buccal Mucous Membrane, not hitherto classified—Dr. J. N. Roy, Montreal.

Section on Mental and Nervous Diseases.

Dr. W. H. Hattie, Halifax, Chairman; Dr. J. C. Mitchell, Brockville, Secretary.

Some Clinical Considerations of Dementia Præcox—Dr. Elbert M. Somers, Ogdensburg, N.Y.

Hydrotherapeutics when applied to Mental and Nervous Diseases—Dr. A. T. Hobbs, Guelph.

The Differential Diagnosis of some forms of Mental Diseases, with a note as to Treatment—Dr. Gerald Fitzgerald, Toronto.

Title to be announced—Dr. E. W. Archibald, Montreal.

Title to be announced—Dr. Colin Russel, Montreal.

Some Points in the Etiology of Progressive Muscular Atrophy, with Especial Reference to Heredity—Dr. D. A. Campbell, Halifax.

A Study of Thomsen's Disease (Myotomia Congenita)—by a sufferer from it.

Insanity and the General Practitioner—Dr. Moher, Brockville.

Hysterical Manifestations Occurring After the Removal of a Brain Tumor—Dr. D. A. Shirres, Montreal.

Section on Gynecology and Obstetrics.

Dr. F. A. L. Lockhart, Montreal, Chairman; Dr. D. Patrick, Montreal, Secretary.

Title to be announced—Dr. Wm. Gardner, Montreal.

Some Cases of Cæsarian Section—Dr. R. E. Webster, Ottawa.

Pregnancy and Heart Troubles, with Report of Cases—Dr. J. C. Cameron, Montreal.

Title to be announced—Prof. de L. Harwood, Montreal.

Cases of Vicarious Menstruation—Dr. Blakeman.

Uterine Inversion, with the Report of a Case—Dr. D. Patrick, Montreal.

The Role of the Gonococcus as a Factor in Infection, following Abortion or Full Term Delivery—Dr. Fraser G. Gurd, Montreal.

Report of Second Case of Chorio-Epithelioma—Dr. F. A. L. Lockhart, Montreal.

Thoroughness in Abdominal Surgery—Dr. A. Lapthorn Smith, Montreal.

Pubiotomy—Edward D. Farrell, Halifax, N.S.

Title to be announced—Dr. D. J. Evans, Montreal.

Military Surgery.

Dr. G. Sterling Ryerson, Toronto, Chairman; Dr. T. H. Leggatt, Ottawa, Secretary.

Address by the President of the Association of Medical Officers of the Militia of Canada, Colonel Ryerson, M.R.D., Toronto.

On the Advisability of Forming a Canadian Ambulance and Red Cross Association—Lieutenant-Colonel Jones, D.G.M.S., Ottawa.

Title to be announced—Lieutenant-Colonel Cameron, A.M.C., No. V. Field Ambulance.

The Territorial Army Medical Corps, and the Canadian Medical Services—A Comparison—Lieutenant-Colonel Sponagle, A.M.C.

Title to be Announced—Captain H. A. Kingsmill, 7th Fusiliers.

Some of the Difficulties met with in Camp Sanitation—Captain G. M. Campbell, 7th C. A.

Title to be Announced—Lieutenant-Colonel Maclaren, P.M.C., M.D. No. 8.

The Present Aspect of Military Sanitary Work—Major L. Drum, P. A. M. C.

Ready and Simple Tests for Water, Milk and the Detection of Disease in Animals—Captain L. M. Murray, A.M.C., No. 1 Field Ambulance.

Since above Programme was put in type, we have been requested by the Secretary to add the following papers:

Treatment of Meningitis with Flexner's Serum—Dr. F. G. Finley and Dr. P. G. White, Montreal.

The Diagnostic Value of Perversion of Gastric Secretion—Dr. Graham Chambers, Toronto.

The X-Ray as a Therapeutic Agent, Its Indications and Untoward Effects, having Special Reference to Its Action upon the Generative and Internal Secretory Organs of the Body—Dr. Omar Wilson and J. Harold Alford, Ottawa.

MEETING OF THE ASSOCIATION OF AMERICAN TEACHERS OF THE DISEASES OF CHILDREN.

The Association of American Teachers of the Diseases of Children will hold its annual meeting in Chicago at the Great Northern Hotel, corner of Jackson Boulevard and Dearborn, on June 1st.

Requirements for membership in this Association are somewhat unique. To be eligible one must be a regular physician resident in the United States, Canada or Mexico, who is in good professional standing and membership in his county or local medical society and actively engaged as Professor or Associate Professor or Clinical Professor of Pediatrics, or as adjunct to such a chair, or who holds the position of Lecturer on this branch or an equivalent position in a recognized medical college, or who is a member of a properly organized hospital or dispensary staff actively engaged in the treatment of children. All such are invited to join the Association; and all physicians and surgeons interested in children are invited to attend the meeting. Its objects are the study, the teaching and the practice of pediatrics.

The officers of the Association are as follows:

President.—Samuel W. Kelley, M.D., Professor of Diseases of Children in Cleveland College of Physicians and Surgeons, Medical Department of Ohio Wesleyan University.

Vice-President.—Chas. Douglas, M.D., Professor of Diseases of Children in Detroit College of Medicine.

Secretary.—John C. Cook, M.D., Professor of Diseases of Children in Post-Graduate Medical School and Hospital of Chicago (deceased).

Secretary Pro Tem.—Robert A. Black, M.D., Chicago.

Treasurer.—George G. Cattermole, M.D., Professor of Diseases of Children in Colorado School of Medicine.

Senators.—W. C. Hollopeter, M.D., Professor of Diseases of Children in Medico-Chirurgical College of Philadelphia; H. M. McClanahan, M.D., Professor of Diseases of Children Medical Department of the University of Nebraska, Omaha; F. R. Gilbert, M.D., Professor of Diseases of Children Kentucky Medical College, Louisville, Ky.

The programme for the Chicago meeting is not completed, but in part it is here presented:

"Address of Welcome," Arthur D. Bevan, M.D., Prof. of Surgery Med. Dept. Univ. of Chicago, Chairman Council of Education A.M.A.

"Address of the President," Samuel W. Kelley, M.D., Prof. Dis. of Children, Cleveland College of Physicians and Surgeons,

Med. Dept. Ohio Wesleyan University, Cleveland, Ohio.

"The Teaching of Pediatrics as Seen by an Inspector of Medical Colleges," Frederick C. Zapffe, M.D., Secy. American Medical College Assn, Chicago, Ill.

"The Fallacy of Attempting to Teach Pediatrics in the Chair of Practice," John A. Witherspoon, M.D., Prof. Practice of Medicine, Vanderbilt University, Nashville, Tenn.

"The Teaching of Pediatrics in the European Schools," H. E. McClanahan, M.D., Prof. of Pediatrics, Univ. of Medicine, Omaha, Neb.

"The Teaching of Pediatrics in the Medico-Chirurgical College of Philadelphia," W. C. Hollopeter, M.D., Prof. Pediatrics Medico-Chirurgical College, Philadelphia, Pa.

"The Doctrine of Difficult Dentition," Theodore J. Elterich, M.D., Diseases of Children, Western Univ. of Penna., Med. Dept., Pittsburg, Pa.

"Anatomical Peculiarities of Infants and Children," Richard B. Gilbert, M.D., Prof. Diseases of Children, Louisville Univ., Louisville, Ky.

"Unciniariasis in the Southern States," J. Ross Snyder, M.D., Birmingham, Ala.

Paper, Wm. W. Butterworth, M.D., Associate Prof. Diseases of Children, Tulane Univ., New Orleans.

"Some Points on Infants' Clothing," Alfred C. Cotton, M.D., Prof. Diseases of Children, Rush Med. College, Chicago.

Paper, Robert A. Black, M.D., Chicago, Ill.

Paper, Wm. J. Butler, M.D., Chicago, Ill.

Paper, J. W. Van Derslice, M.D., Chicago, Ill.

THE ONTARIO MEDICAL ASSOCIATION.

As our June issue will be out before The Ontario Medical Association meeting is over, it is obviously impossible for us to give our readers any report of the meeting at Hamilton until July 1st. This we of course regret; but merely mention the fact so that our readers will not think our present issue lacking in interest. Judging from the efforts put forward by President Ingersoll Olmsted and his associates for months past, everything points to the 1908 meeting of The Ontario Medical Association being one of the most successful, both scientifically and otherwise. The President, Secretary Dr. Lusk and the different Committees have worked hard and consistently in this direction, and we hope to be able to announce in our next number that the Hamilton meeting outstripped all former years in point of attendance of members and actual work accomplished.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

THE thirty-fourth annual meeting of the Mississippi Valley Medical Association will be held in Louisville, Ky., October 13, 14, 15, 1908, under the presidency of Dr. Arthur R. Elliott, of Chicago.

Announcement has just been made of the selection of the orators for the coming meeting by the President. The address in medicine will be delivered by Dr. George Dock, Professor of Medicine in the University of Michigan, Ann Arbor, and the address in surgery by Dr. Arthur Dean Bevan, Professor of Surgery in Rush Medical College, Chicago. The mere mention of these names is enough of a warrant that this feature of the program will be in every way first class.

The local Committee of Arrangements in Louisville has selected the Seelbach Hotel as headquarters, the general sessions and the section meetings being held in the hotel's large auditoriums.

One of the features of the entertainment projected is a smoker in the famous Rathskeller of the hotel—the finest of its kind.

The McDowell button, so much admired at the 1897 meeting in Louisville, will be reproduced in bronze for this meeting.

ITEMS OF INTEREST.

American Medical Editors' Association.—The annual meeting of this Society will be held at the Auditorium Hotel, Chicago, on May 30th and June 1st. An extensive and interesting programme has been prepared and every member of the Association is urged to be present, and editors of medical magazines, not now affiliated with this Society, are also invited to meet with them. Do not forget the date, Saturday, May 30th, and Monday, June 1st.

L'Association des Medecins de longue francaise de l'Amerique du Nord.—The Tercentennial anniversary of the founding of the City of Quebec is to be marked by a series of festivals beginning July 20th next. The Association of the French-speaking physician of North America is going to convene in the ancient capital on that occasion. The sessions will be held in the buildings of the Laval University, on the 20th, 21st and 22nd of July next.

Correction.—In our report of the Post-Graduate Clinic held at Toronto General Hospital on Saturday, March 28th, 1908, and which report appeared on pages 286, 287, 288 and 289 of our May issue, we regret that, through a printer's error, Dr. Duncan Ander-

son was reported to have administered to one of his patients nine centigrammes of Stovaine. This should have read six centigrammes, and Dr. Anderson tells us that he has never administered in any one case a larger preliminary dose than seven centigrammes of this drug. We regret the error made.

Muskoka Sanatoria Medical Staff.—W. B. Kendall, M.D., C.M., L.R.C.S., L.R.C.P., Physician-in-Chief of the Muskoka Cottage Sanatorium, has been appointed Physician-in-Chief of both the Cottage Sanatorium and the Muskoka Free Hospital for Consumptives, and C. D. Parfitt, M.D., M.R.C.S., L.R.C.P., Physician-in-Chief of the Free Hospital since its opening in 1902, becomes Resident-Consultant of the two Sanatoria, each giving his entire time and effort to these institutions. The medical staff will also include a trained resident pathologist and two assistant doctors, together with a staff of specially trained Nurses.

The All-Conquering Kimono.—The old-fashioned wrapper has been succeeded by the all-conquering kimonó, both in the seclusion of one's bedchamber and in the semi-privacy of home in the forenoon, notes *The Delineator*. The tea-gown, while equally conducive to ease and comfort, is a step nearer formality. Like the shirt-waist, the kimono develops in staying power as the seasons pass. It is convenient to slip on and off; it is comfortable to luxuriousness; and in the Americanized form it is certainly graceful. The pointed sleeve is the latest development, and the armhole revers, or mandarin strap, as it is sometimes called, adds an effective touch.

Special Number of the Boston Medical and Surgical Journal.—The *Boston Medical and Surgical Journal*, of May 7, in doing honor to Dr. Heber Reginald Fitz, Hersey Professor of the Theory and Practice of Physics in Harvard University, has taken a graceful and commendable course toward one whose contributions to medical literature have been both numerous and important. In keeping with its dedication, the communications in this number of the *Journal* are made by Professor Hersey's House pupils at the Massachusetts General Hospital, and deal in a scientific manner with many of the newer subjects now finding their way into medical literature. There being twenty-six such articles, the *Journal* is veritably a report of recent advances in medical science.

Medical Emergencies.—The National Volunteer Emergency Service, instituted in 1900, has recently been re-organized by the election of Dr. James Evelyn Pilcher, the distinguished editor of *The Military Surgeon*, as its Director General, and Dr. F. Elbert Davis, of New York, as its Adjutant General. Its work will be

conducted along military lines, the details being worked out in three separate Corps, a First Aid Corps, a Public Health Corps, and a Medical Corps—the latter consisting of physicians, with rank from Lieutenant to Colonel, according to length of service, to whom are afforded special opportunities for emergency training. It includes among its personnel a large number of notable personages, and is rapidly extending its membership throughout the country. Full details regarding the Service and its great work may be obtained by addressing Director General Pilcher at Carlisle, Pa.

Summer Courses.—The only holidays recognized at the Philadelphia Polyclinic are Christmas and the Fourth of July, and the dispensary work never stops during the summer. In some of the departments, notably clinical medicine, surgery, dermatology, diseases of children, and diseases of the ear, the attendance is quite as heavy as during the winter months, and affords plenty of opportunity for clinical study. The classes are small and the teaching in the dispensaries is, therefore, carried on in the most informal manner, in order to bring the student into close touch with his work. Although, owing to weather conditions, the operative courses have to be discontinued during the summer, the laboratory of clinical pathology and the pathological laboratory are open during the early part of the summer, and courses in these branches are given until August 1st.

The Physician's Library.

BOOK REVIEWS.

Surgical Therapeutics. By Emery Lanphear, M.D., Ph.D., LL.D., St. Louis, Mo., Professor of Surgery, Hippocratean College of Medicine, Formerly Professor of Operative Surgery in the Kansas City Medical College, and Professor of Surgery in the St. Louis College of Physicians and Surgeons. Chief Surgeon to the Woman's Hospital of the State of Missouri. Chicago: The Clinic Publishing Company. 1907.

We have not followed the advice of the author and read his book through, because there were other things to do, and also because, as the subjects treated of vary, as soon as curiosity about one theme was sated, we hied to another and proceeded to extract the honey from it, without reference to its position in his book. Dr. Lanphear's book contains a lot of good things—is not a lexicon, nor a compend of predigested food for surgical weaklings, but a tonic to the brains of men who have travelled along some of the same roads as the author. J. J. C.

Diseases of the Breast with Special Reference to Cancer. By William L. Rodman, M.D., LL.D., Professor of Surgery in the Medico-Chirugical College of Philadelphia; Professor of Surgery in the Women's Medical College of Pennsylvania; Surgeon to the Medico-Chirugical Hospital, The Women's College Hospital, The Philadelphia General Hospital, The Jewish Hospital, and to the Presbyterian Hospital; Fellow of the American Surgical Association; Membre de la Societe Internationale de Chirurgie, etc. With 69 plates, of which 12 are printed in colors, and 42 other illustrations. Philadelphia: P. Blakiston's Son & Co, 1012 Walnut St. 1908.

In this work there is a large collection of useful and interesting matter regarding the breast and the various conditions met there. The anatomy of the breast, and especially of its lymphatic connections, is carefully gone into by Charles W. Bonney. His statistics collected with regard to carcinoma, and his method of operating hold out considerable hope to the unfortunate who finds herself afflicted with this dread malady. He is hard on the physician who undertakes to scatter the tumor by internal medication, and is likewise caustic in his remarks regarding the trypsin-amylopsin

and is not less severe on the treatment by X-rays before operation. This certainly is as it should be, for oftentimes valuable time is lost which makes the possibility of cure very much smaller. The work is readable and well written, although occasionally one meets with something that grates upon one's finer feelings, for example, when he speaks of Sir James Paget as "Sir George." It makes one think that the proof-reading was not as carefully done as it might have been.

At the present day it appears that a book on a medical or surgical subject must, in the eyes of the public, cost five dollars or nothing, and it usually is the five dollars, whereas this particular book might have been condensed into a much smaller space. This is one of the faults of the text-book of the present day, that there is a tendency to padding and particularly to large spacing.

Dr. Rodman was impressed with the value of work along this line when interne to the late Dr. Gross, and naturally after 25 years his opinion should be one worth following. S.

Proceedings of the Royal Society of Medicine. Vol. I., No. 6. April, 1908. Longmans, Green & Co., New York, Calcutta, Bombay. 1908. Price, seven shillings and sixpence net.

The April issue of this excellent monthly journal is a worthy successor to the preceding numbers. It includes the same sections as referred to in past reviews, some of the articles being particularly good. Among the contributors we find such men as G. W. Dawson, F.R.C.S.I.; W. S. Fox, M.D.; H. Radcliffe Crocker, M.D.; J. H. Sequeira, M.D.; J. Goodwin Tomkinson, M.D.; E. G. Graham Little, M.D.; J. Dundas Grant, M.D.; Arthur Latham, M.D.; F. Parkes Weber, M.D.; H. MacNaughton Jones, M.D.; Donald Armour, F.R.C.S., and J. Milne Bramwell, M.B.

We have just received word from the Secretary of the Royal Society of Medicine that the criticism which appeared in this *Journal* (and which we offered in the kindliest spirit) when we reviewed Vol. I., No. 1, of the *Proceedings*, viz., that we considered it unwise that the *Proceedings* be offered for sale to the lay public, has had effect and that the Society never intended that the volumes be sold to any but members of the profession, the error occurring through a misunderstanding with the publishers.

The Everyday Diseases of Children and their Rational Treatment. By George H. Candler, M.D. The Clinic Publishing Co., Chicago, Ill.

The author has noted many practical points in his professional career, which he gives to the profession as useful hints to treatment. Many may find it useful. A. J. H.

Practical Dietetics. With Reference to Diet in Disease. By Alida Frances Pattee, Graduate Boston Normal School of Household Arts; late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City; Special Lecturer at Bellevue, Mount Sinai, Hahnemann, and the Flower Hospital Training Schools for Nurses, New York City; St. Vincent de Paul Hospital, Brockville, Ont., Canada. 12mo, cloth. 300 pages. Price, $1.00 net; by mail, $1.00; C.O.D., $1.25. New York: A. F. Pattee, publisher. 52 West 39th Street.

Thoroughly practical and comprehensive, about describes Miss Pattee's book on dietetics. It is written *by a nurse for a nurse,* and should be adopted by the different hospital training schools without hesitation. It puts in attractive form the result of up-to-date and scientific nursing.

Hypnotic Therapeutics in Theory and Practise, with numerous illustrations of Treatment by Suggestion. By John Duncan Quackenbos, A.M., M.D., author of "Hypnotism in Mental and Moral Culture," "Practical Physics," etc. New York and London: Harper & Brothers, Publishers. 1908.

Most physicians and men of broader views cannot but stop at times and wonder where the "demarkation line" which separates sanity from insanity will stop. It is simply appalling the multitudinous phases which characterize mental conditions of human beings at the present day. They are so numerous and blend so delicately one into another that every observer has added some new disease name to the already overstocked vocabulary. That Hypnotic Therapeutics or Suggestive Therapeutics is making vast strides is evidenced by the abundant literature that is being published and circulated at the present day. That a great many neurotic ailments can be and are cured by suggestion is true, but I am a little skeptical yet as to whether organic disease, such as diabetes mellitus, can be cured. The author has compiled a book of over three hundred pages which will interest many.

A. J. H.

Minor Medicine. By Walter Essex Wynter, Middlesex Hospital, London. Sydney Appleton, publisher.

This is a most valuable book on the lesser ailments, which, after all, make up the major part of one's practice. The initial chapter deals with such subjects as "A Bilious Attack," "Heartburn," "Hiccough," "Constipation," "Fissure and Hemorrhoids." The second chapter includes, "Baldness," "Freckles," "Warts," "Pimples," "Chilblains," etc. Chapter IX is on Diet, including "Alcohol," "Tea," "Coffee" and "Milk." The

author concludes with a formulary and an index. The text is carefully written and is admirably adapted to the wants of the young physician. E. A. M'C.

The Halo. By Bettina Von Hutten, author of "Pain," "Pain Decides," etc. With frontispiece by B. Martin Justice. Toronto: William Briggs. 1907.

The readers of Bettina Von Hutten's charming novels are unanimous in praising her latest tale, "The Halo." The story is built on society life in England, and is full of dramatic situations. These features, coupled with its excellent literary form, make it a very readable novel. J. J. C.

The Horse: Its Treatment in Health and Disease, with a complete guide to breeding, training, and management. Edited by Prof. J. Wortley Axe, M.R.C.V.S., ex-President of the Royal College of Veterinary Surgeons; late lecturer at the Royal Veterinary College and at the Agricultural Colleges of Downton and Wye; Chief Veterinary Inspector to the Surrey County Council; Consulting Veterinary Surgeon to the British Dairy Farmers' Association; Author of "The Mare and Foal," "Abortion in Cattle," "Anthrax in Farm Stock," "Examination of Horses as to Soundness," "Glanders: Its Spread and Suppression," "Swine Fever," "Lithotomy, or the Removal of Stone from the Bladder of the Horse." Published in nine volumes. Divisional Volumes VI. and VII. London, England: The Gresham Publishing Co., 34 Southampton Street, Strand. 1907. Canadian agents: D. T. McAinsh & Co., Bay and Adelaide Streets, Toronto.

Vol. VI. has as its frontispiece a splendid colored plate of the Clydesdale stallion, "Holyrood," owned by the Marquis of Londonderry. It is a wonderfully good picture of a noble animal. Other full-page plates are given throughout the book, of the Deep Muscles of the Neck and Trunk, Malformation of the Legs, Dislocation of the Patella, Laminitis, the Arab stallion, "Mesaoud," and the chestnut hunter gelding, "Artist." Volume VI. completes The Muscular System, considers Dislocations, Diseases of the Feet, Defective Action and Injuries arising out of It, Wounds and Their Treatment, Ulcers, First Aid to the Sick and Injured, the volume closing with 50 pages on Medicines and Drugs. Divisional Volume VII. includes 14 full-page plates, of which 4 are colored. It also has throughout it a large number of text illustrations, adding materially to its value. The first thirty pages are devoted to Medicines, Prescriptions, and their administration. The author then deals with such subjects as The Nurse, The Sick Box, Invalid Food, Poulticing, Mustard Plasters, Bandaging, Blistering and

allied subjects. He then goes into Poisoning. Corrosive and Narcotic Poisons, after which he considers at some length Veterinary Hygiene; Stables and Their Construction, Lighting, Ventilation, etc; Food, Its Selection and Preparation, Digestion; Water, and Individual Hygiene. Prof. Axe closes Vol. VII. with 30 pages on Operations, including Neurotomy, Tenotomy, Castration, Passing the Catheter, Ovariotomy, etc.

Woman. A Treatise on the Normal and Pathological Emotions of Feminine Love. By Dr. Bernard S. Talmey, Gynecologist to the Yorkville Hospital; former Pathologist to the Mothers' and Babies' Hospital. For Physicians and Students of Medicine and Jurisprudence, with 23 drawings in the text. Second enlarged and improved edition. Practitioners Publishing Company, 55 West 126th St., New York.

This is, no doubt, one of the best books that has come out dealing with the sex problem, and will be of great use to the physician in giving pointed advice on a subject regarding which they are frequently consulted. Price, $3.00. Sold only to the medical and legal profession. A. J. H.

An Index of Treatment by Various Writers. Edited by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital, and Assistant Physician to the Hospital for Sick Children, St. Ormond Street, and H. Stansfield Collier, F.R.C.S., Surgeon to St. Mary's Hospital; Joint Lecturer on Surgery in St. Mary's Hospital Medical School, Surgeon to the Hospital for Sick Children, St. Ormond Street. Revised to conform with American usage by Warren Coleman, M.D., Professor of Clinical Medicine and Instructor in Therapeutics in Cornell University Medical College; Assistant Visiting Physician to Bellevue Hospital, New York. New York: Wm. Wood & Co. 1908.

The authors have accomplished at least one thing in writing this book, and that is to present the busy practitioner with a volume of reasonable size covering a wide subject. Too few writers of medical literature realize how important it is not to make the volume too large and cumbersome, but to present their subject so digested and boiled down as to be readable and therefore attractive. The editors of "An Index of Treatment" are to be congratulated upon the outcome of their labors. They include in their volume the work of quite an army of contributors, including, among others, such men as Sir Thos. Clifford Allbutt, Byron Branwell, Chas. W. Cathcart, A. H. Cheatle, Thos. S. Clouston, Geo. A. Gibson, Wm. J. Gow, L. G. Guthrie, Jas. E. Lane, Wm. Hunter, Edmund Owen, Robert W. Philip, Robert Saundy, Sir

Jas. Sawyer and Norman Walker. The book is arranged alphabetically as to subjects, though we think that the publishers have made a mistake in using such small type. W. A. Y.

The Diagnosis and Treatment of Pulmonary Tuberculosis. By Francis M. Portenger, A.M., M.D. Professor of Clinical Medicine University of Southern California. Pp. 377. 42 charts and illustrations. William Wood & Co. New York. 1908. Price, $3.50.

We must confess to having read this work with pleasure. It is a capital monograph, covering well the clinical aspect of the disease. The diagnosis of the disease in early and advanced stages is treated in separate chapters. The various methods of diagnosis are clearly stated, and as in other chapters throughout the book the author's personal experience is brought prominently before the reader. In these chapters more space might have been given to Kromp method of percussion of the apices. The diagnosis on page 20, which illustrate both this and the lowering of the apex from infiltration are very poor, giving one the impression of being photographed from a normal chest which is slightly asymmetrical through muscular action. One gathers that the author is familiar with Turbau's work on diagnosis, and yet he states on p. 89 that he has seen no reference in the literature to the occasional difficulty in locating the apex beat in cases of advanced tuberculosis. Turbau ascribes this to interposition of the left lung, when the left thoracic viscera are drawn to the right through contraction of the right lung.

There is a very practical paragraph on thermometry in diagnosis. The use of the X-rays in diagnosis is dismissed in a few words in spite of the value placed upon it by many clinicians.

Careless copying from another author has given us, on page 112, a startling table of deaths from consumption in the village of Falkenstein, of 5 to 33.3 per 100 population, when the figures should read as percentages of deaths from all causes. On the same page he gives the mortality from consumption in Davos as 9.7 per thousand population, as compared with 22.5 per thousand in Germany. This should read per ten thousand.

Tuberculin therapy is discussed at length. The author shows a wide knowledge of the various tuberculins and their clinical application. The work of Wright and Bulloch is quoted at great length, though the author does not consider the estimation of the opsonic index at all necessary in the administration of tuberculin. Dosage and intervals are both considered, making these chapters a safe guide to the practitioner wishing to use tuberculin therapeutically.

His initial dose of old tuberculin, 1-10 to 1 milligram, is

larger than most therapeutists care to use, and in many cases would produce a reaction.

Portenger expresses himself strongly against the use of breathing exercises in any form while disease is yet active.

A work on pulmonary tuberculosis which goes fully into the administration of the tuberculins is most acceptable at present, and we bespeak for this a wide circle of readers. J. H. E.

La Pratique de la Médicine. Par William Osler, Professeur Royal à l'Université d'Oxford. Traduction Francaise sur la 6e Edition par les docteurs M. Salomon, Chef de la Clinique à la Faculté et Louis Lazard, Ancien Interne de l'Hopital de Rothschild. Préface de Pierre Marie. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne. 1908.

In glancing through more than one of the chapters of Dr. Osler's work, in its French dress, one is favorably impressed with the elegance of the translation. An occasional lapse is noted, which simply proves that a Frenchman, no matter how scholarly he may be, cannot be perfect in the peculiarities of the English language. In the article on Beri-beri (p. 264, 8th line from the bottom of the page), "*Neuf* se sont produits parmi les 200 employés de l'hopital," should have been Aucun cas ne s-est produit parmi les 200 employés de l'hopital.

Words of some importance are omitted, viz., in the same chapter, the words "Nearly all among the Philippine Scouts" are omittèd and not translated.

These, and some other little blemishes will, doubtless, cease to be visible in a second edition which, we hope, may soon be required as a reward for the very laudable enterprise of the French publisher, M. G. Steinheil.

Dr. P. Marie, in a highly complimentary preface, praises Dr. Osler for his ability as a medical teacher. The two volumes, bound in paper, sell for 25 francs ($5), bound in one volume, the work is well worth $6, and should be welcomed by physicians who read the French language. J. J. C.

The Abdominal and Pelvic Brain with Automatic Visceral Ganglia. By Byron Robinson, B.S., M.D., Chicago, Ill. Hammond, Ind.: Frank S. Betz.

This bulky volume is essentially a collection of papers published in various journals, within the last fifteen years. The enormous amount of work which their preparation must have entailed, the tireless industry and the originality of the investigator, the ample opportunities at his disposal and the logical arguments by which his views are sustained stand out prominently and impress even the most casual of readers.

How it could have been possible to spin out to nearly 700 pages a study of the anatomy, physiology and pathology of the solar plexus and of the cervico-uterine ganglia might prove a difficult problem to one even with the pen of a ready writer. If the said ready writer were disposed to be critical he might find it in his heart to ask if the practical results attained are in any fair proportion to the labor expended upon them.

To this we would make reply that science, for its own sake, is good, and that the grim utilitarian takes rank below the honest and accurate investigator. Interesting as Dr. Byron Robinson always is, we have sometimes thought that he stopped just a little, a very little, short of success in dealing with the questions which have so long engaged his attention and upon which he has written at such learned length.

A profusion of original wood cuts assist in making clear the text and add materially to the interest of the book. N. A. P.

The Operations of Surgery. Intended especially for the use of those appointed recently on a hospital staff, and for those preparing for higher examinations. By W. H. A. Jacobson, M.Ch. (Oxon.), F.R.C.S., Consulting Surgeon Guy's Hospital; and R. P. Rowlands, M.S. (London), F.R.C.S., Assistant Surgeon and Surgeon to the Orthopedic Department, Guy's Hospital; Joint Teacher of Operative Surgery in the Medical School. Fifth Edition. With seven hundred and seventy-seven illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1908.

Those who are working for higher examinations or have recently been appointed to important hospital positions have long considered this splendid work as fulfilling a very great want. The book is essentially written for this class of practitioners, and is one which they, as well as all those who follow surgery, will find of extreme value. The mere fact of there being seven hundred and seventy-seven illustrations speaks well for the desire of the authors to present everything in as clear a manner as possible. The authors again adopt the system of dealing with each region separately, even though former critics had found fault with this method. It is almost impossible in a work of this size to attempt any critical review. Practically everything known to modern surgery is given, and all the methods that experience has proved of value are discussed. The authors have been very careful in their endeavor to give due credit to the work of others, and have presented two large volumes, each of which contains over nine hundred pages, which will remain a monument to the surgery of English writers. We think the book will be found of far greater use to the average general practitioner, who is sometimes called upon to do important

operative work on a few hours' notice, than the authors seem to think. It is just the type of book a general practitioner in a small town wants to read the night before some operation has forced itself on him, the various methods of which he is not as familiar with as he wishes to be. P. G. G.

Messrs. Reed & Carnrick, the well-known firm of manufacturing chemists, at Jersey City, N.J., have recently sent out to the profession a most interesting pamphlet in celebration of the 100th anniversary of McDowell's operation for ovariotomy. The pamphlet is illustrated with original etchings of the home of Dr. J. Marion Sims, at Mount Meigs, Ala., 1836; Dr. J. M. Sims' Statue, Bryant Park, New York; Harvard Medical School, 1908; Holden Chapel; College of Physicians and Surgeons, 1813; Office of Dr. Sims, 1840-1853; Old Charity Hospital, 1815, and the Rockefeller Institute for Medical Research. The pamphlet is full of most interesting historical material regarding Dr. Ephraim McDowell, Dr. J. Marion Sims, the First Medical School in New York, opened 1767, and other subjects of equal interest. Any practitioner who does not receive a copy should write for one, as it is worthy of preservation.

Saunders' Forthcoming Books.—Messrs. W. B. Saunders Company, medical publishers, of Philadelphia and London, announce for publication before June 30th a list of books of unusual interest to the profession. We especially call the attention of our readers to the following: Bandler's Medical Gynecology, treating exclusively of the medical side of this subject; Bonney's Tuberculosis, Volume II. Kelly and Noble's Gynecology and Abdominal Surgery, Volume IV. Keen's Surgery, Gant's Constipation and Intestinal Obstruction, Schamberg's Diseases of the Skin and the Eruptive Fevers, John C. DaCosta, Jr.'s, Physical Diagnosis, Todd's Clinical Diagnosis, Camac's Epoch-Making Contributions in Medicine and Surgery. All these works will be profusely illustrated with original pictures.

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